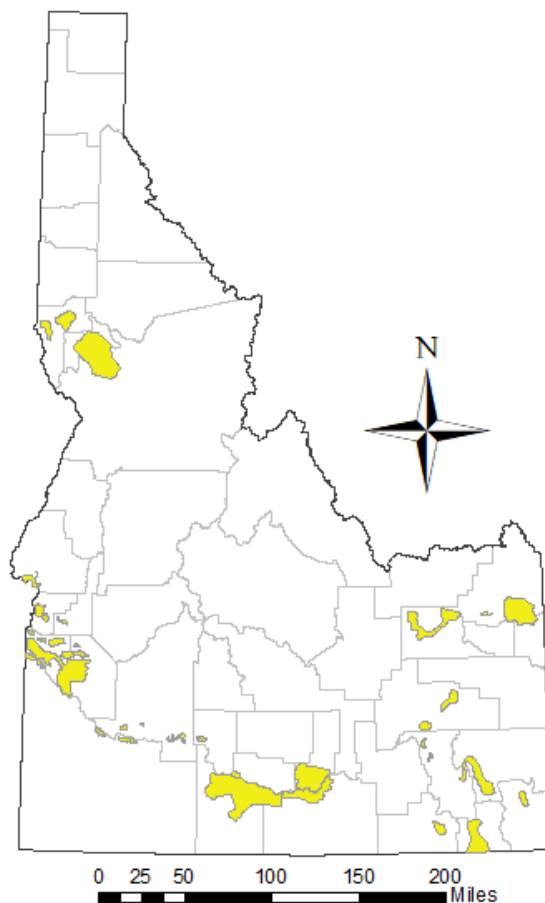


2020 Nitrate Priority Area Delineation and Ranking Process

Public Comment Draft



State of Idaho
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Abbreviations, Acronyms, and Symbols

DEQ	Idaho Department of Environmental Quality
GWMTTC	Ground Water Monitoring Technical Committee
IDWR	Idaho Department of Water Resources
ISDA	Idaho State Department of Agriculture
L	liter
mg	milligrams
PWS	public water system
SWPA	source water protection area
US	United States
USGS	US Geological Survey

Introduction

The *Idaho Ground Water Quality Plan* (Plan) of 1996, acknowledges that ground water quality monitoring is an essential implementation and evaluation tool for prevention, regulatory and remediation activities (Idaho Ground Water Quality Council 1996). The Plan recognizes that a comprehensive monitoring program is a fundamental way to verify that the concepts embodied in the plan are actually working. Early detection of ground water quality problems can prevent development of more extensive problems and allows agencies and the public to mitigate potential health threats and adverse effects on beneficial uses of ground water. Per the Plan (Policy V-B.), the policy of the state of Idaho is to implement and maintain a monitoring program designed to investigate ground water quality in regional and local areas where contamination may have occurred. In response to regional and local ground water monitoring conducted in accordance with the Plan, Nitrate Priority Areas (NPAs) are developed to identify aquifers with ground water quality degradation due to nitrate so resources can be directed to those areas to help protect public health.

The Idaho Department of Environmental Quality (DEQ) policy memorandum, “Policy for Addressing Degraded Ground Water Quality Areas” (DEQ 2000) was developed with the purpose of outlining the process for identifying, delineating and prioritizing the areas with significant water quality degradation. The policy has expired, but the initial process continues to be used to ensure consistency between subsequent evaluations. The policy was designed to be used for a variety of contaminants of interest; however, nitrate is the only constituent that has been evaluated under this process because it is the most widespread ground water contaminant in Idaho, has a wide variety of sources, and is commonly found in public water supply systems.

The criterion for an NPA is at least 25% of sampled wells have nitrate levels at or above 5 milligrams per liter (mg/L). The state and federal drinking water standard, as well as the Idaho Ground Water Quality Standard for nitrate is 10 mg/L. In 2002, DEQ, in cooperation with the Idaho Ground Water Monitoring Technical Committee (GWMTC), published the first NPA ranking which included 25 areas. In 2008 and 2014, 32 and 34 NPAs were delineated and ranked (prioritized), respectively (DEQ 2008 and DEQ 2014). The GWMTC is composed of technical staff from state and federal government agencies that collect or use ground water quality information to fulfill their mission. Agencies represented include DEQ, Idaho Department of Water Resources (IDWR), Idaho State Department of Agriculture (ISDA), Idaho Soil and Water Conservation Commission, Idaho Geological Survey, Idaho Department of Health and Welfare, Idaho public health districts, US Environmental Protection Agency, US Geological Survey (USGS), and Natural Resources Conservation Service.

For the 2020 NPA ranking, DEQ and GWMTC revised the NPAs using data collected from 1990 through 2016. The reevaluation process uses results from sites only sampled once, and the most recent result from sites sampled repeatedly to delineate NPAs.

In fall 2017 and spring 2018, DEQ and GWMTC began revising the 2014 NPAs. Except for refining trend scores by adding tendencies before the 2014 ranking, the scoring process has remained virtually unchanged since the first NPA ranking in 2002.

The 2020 NPA priority list is divided into three priority categories (moderate, moderate-high, and high priority), based on a rounded numerical output from the scoring process.

Phase I—Data Acquisition, Compilation, and Analysis

In fall 2017, DEQ began soliciting and compiling nitrate results and well location data from the numerous agencies monitoring ground water quality in Idaho. Well location information, sampling date, and nitrate concentration data were compiled by DEQ. Spatial information was reconciled and integrated into a Geographic Information System.

Sources of data included the DEQ public water system (PWS) database; IDWR Statewide Ambient Ground Water Quality Monitoring Network and Twin Falls regional well driller data; USGS studies; DEQ regional and local monitoring projects; and ISDA regional studies and dairy sampling. Additional data sources for this iteration included data from inactive PWS wells and data from the DEQ Idaho National Laboratory Oversight Program. Data from 1990 through 2016 were spatially located and assigned a nitrate value. For sites with multiple values (i.e., the well has been sampled several times or by multiple agencies), only the most recent value was used.

Extensive efforts were made to align sites between and within agencies to reduce redundancy in the data set. For example, if a single well was sampled by three different agencies (or was identified with multiple site identification numbers), the potential exists for three different sample results with three slightly different locations. Improvements in global positioning system accuracy and well tag use have allowed refinement of data to one nitrate value. Data previously included in the data set may have been removed if found or suspected to be redundant. Data from site-specific monitoring wells associated with known point sources of nitrate contamination were not included in the data set. Ground water quality data from over 12,000 wells statewide were compiled and evaluated. The 35 NPAs contain data from approximately 4,400 of the over 12,000 wells and encompass a combined area of 1,913,219 acres, providing potable water to roughly 414,500 Idahoans (US Census 2010).

Phase 2—Delineation of Nitrate Priority Areas

Once the data were located spatially and a nitrate concentration was assigned to each location, the NPAs were delineated. While the NPA boundaries are data dependent, they are influenced by a variety of factors. During the 2008 NPA ranking process, the GWMTTC reviewed a variety of approaches and discussed the pros and cons of different methods to delineate NPAs. A single method, which would provide concise, objective, scientifically defensible boundaries, was the GWMTTC's goal. However, after much discussion and multiple attempts to use a single method, it was determined that professional judgment was required to address factors unique to many NPAs. To confirm the validity of boundaries, two geostatistical methods (indicator kriging and ordinary kriging) were incorporated in the process. Geostatistical software packages for indicator kriging and ordinary kriging, available from ESRI ArcMap, were applied to the data. The two geostatistical techniques and professional judgment factors (nitrate concentration and land use) are described in simplified terms below.

- Indicator kriging considers if a value is above or below a specific concentration. It analyzes the data and shows the probability of exceeding a specific concentration. The method allows the user to apply any combination of probability and concentration. For this process, a 25% probability of exceeding 5 mg/L for nitrate was used.
- Ordinary kriging interpolates values between locations with data and contours the data. Areas located within the contour interval of 3.5 mg/L were used.
- Professional judgment is the third component that considers the most recent concentration data, land use, and knowledge of aquifers and hydrogeological factors (e.g., aquifer boundaries and hydrologic boundaries such as rivers). For example, efforts were made to refine boundaries to exclude data indicating low nitrate concentrations (<5 mg/L). In cases where there was a site with a concentration greater than 5 mg/L with no additional data present between the site and undeveloped lands or aquifer boundaries, the NPA boundaries were extended to the boundary between the developed and undeveloped lands or aquifer boundaries.

The NPA boundaries are data-dependent and confirmed using geostatistical methods that provide more objective and scientifically defensible boundaries. However, NPA boundaries should still be considered estimations that identify general areas where nitrate levels are more likely to be elevated. Precise NPA boundaries are not appropriate in many cases because of the dynamic nature of ground water systems. Nitrate levels may fluctuate seasonally or annually for a number of reasons including flow direction or water level changes in response to irrigation practices or seasonal land use practices.

The process yielded 35 NPAs in this iteration, located statewide, stretching from Nez Perce County in northcentral Idaho to Franklin County in southeastern Idaho, and from Owyhee County in southwestern Idaho to Fremont County in eastern Idaho. The spatial distribution of the 2020 NPAs is very similar to the distribution in 2014. Figure 1 shows the distribution and trends of NPAs from 2002 through 2020. In the Twin Falls region, one new area in southwestern Jerome County was added. Delineations of several other NPAs in the Idaho Falls, Pocatello, Lewiston, Twin Falls, and Boise Regional Office areas changed size and shape slightly. The name of the Purple Sage NPA was changed to the NE Canyon County NPA to better reflect the geographic location of the NPA.

Phase 3—Nitrate Priority Area Scoring Process

To maintain consistency with previous efforts, the GWMTC supported the continued use of the scoring process used in 2014 to rank the NPAs. The scoring processes used in the previous iterations (2002, 2008, and 2014) underwent 60-day public comment periods and were revised based on the comments received.

The NPA scoring process, developed by DEQ, in consultation with the GWMTC, provides the rationale for ranking areas in Idaho with identified ground water degradation from nitrate. The ranking process used was intended to achieve the following:

- Ensure consistency
- Minimize subjectivity
- Apply statewide

- Transfer to other types of contaminants, such as pesticides
- Use existing information.

The statewide priority list created through the scoring and ranking process will be used to prioritize the implementation of protective management strategies or corrective action measures within the NPAs.

Scoring considers three weighted primary criteria: population, existing water quality, and water quality trends. A secondary criterion—impacts to beneficial uses other than potable water supply—is considered to a lesser extent because it is not directly related to public health. The secondary criterion complies with DEQ’s “Policy for Addressing Degraded Ground Water Quality Areas” (DEQ 2000). Other beneficial uses potentially adversely impacted by elevated levels of nitrate include aquaculture

Primary Criteria

Population

The population criterion considers the number of people living in an area with potential nitrate-degraded drinking water. This criterion consists of an assessment and point assignment of the following elements.

- **Population within the priority area**—This element is based upon US Census (2010) data. From 1 to 3 points may be accrued at this stage. One point is assigned to areas with populations less than 1,000; 2 points are assigned to areas with populations between 1,000 and 10,000; and 3 points are assigned to areas with populations of 10,000 or greater.
Example: Population = 5,853 = 1,000 to 10,000 = 1 point
- **Source Water Protection Area (SWPA) intersects an NPA or PWS well located within the priority area**—DEQ considers source water assessment areas in ranking the priority areas due to the relative potential to impact drinking water sources. Source water assessment areas, represent the aerial extent of 3-, 6-, and 10-year travel times for ground water to reach the PWS well, spring, or spring intake. If a source water assessment area intersects an NPA, the susceptibility rating of the source water assessment is increased.

This stage provides 0, 1, or 2 points. Areas that do not contain a PWS well or intersect a SWPA do not receive points. Areas that contain 1 to 20 PWS wells and/or SWPAs receive 1 point, and areas with more than 20 PWS wells and/or SWPAs receive 2 points.
Example: PWS wells in Priority Area = 11 = 1 point
- **Number of wells with nitrate concentrations above 10 mg/L**—The GWMTCC determined the number of wells with nitrate exceeding 10 mg/L was an important ranking factor. The number of sampled wells with nitrate greater than or equal to 10 mg/L within the priority area represents the potential for the public to ingest contaminated ground water. This step is intended to equalize the scoring of large populations drinking water from uncontaminated sources with small populations drinking water from nitrate-contaminated sources. Nitrate contamination greater than or equal to 10 mg/L is the only factor tallied.

Points are accumulated as follows: 0 wells = 0 points, 1 to 2 wells = 1 point, 3 to 5 wells = 2 points, 6 to 9 wells = 3 points, 10 to 15 wells = 4 points, and greater than 15 wells = 5 points.

Example: Number of Wells with Nitrate greater than 10 = 29 wells = 5 points

At this stage, the population scores are subtotaled.

Example: $2 + 1 + 5 = 8$

Water Quality

This criterion considers the concentration of nitrate contamination with respect to drinking water standards. The criterion is based on the percentage of sampled wells with ground water nitrate concentrations greater than or equal to 2 mg/L, 5 mg/L, and 10 mg/L, respectively. These categories were selected to maintain consistency with existing data formats used by the GWMTC.

- **Percentage of wells with ground water nitrate concentrations greater than or equal to 2 mg/L**—This concentration threshold indicates human-caused (anthropogenic) impacts. The upper limit for naturally occurring (background) concentrations of nitrate is about 2 mg/L. Points are accumulated by multiplying the percentage of sampled wells by 2.

Example - 88% of the wells sampled equaled or exceeded 2 mg/L. ($0.88 \times 2 = 1.76$)

- **Percentage of wells with ground water nitrate concentrations greater than or equal to 5 mg/L**—This nitrate concentration indicates significant degradation and represents one-half the drinking water standard for nitrate of 10 mg/L. Public drinking water systems are required to increase monitoring frequency when this level is reached. Because these wells are a subset of the wells containing nitrate greater than or equal to 2 mg/L, this percentage is always less than or equal to the percentage of wells above 2 mg/L. Points are accumulated by multiplying the percentage of sampled wells by 5.

Example - 73% of the wells sampled equaled or exceeded 5 mg/L. ($0.73 \times 5 = 3.65$)

- **Percentage of wells with ground water nitrate concentrations greater than or equal to 10 mg/L**—The drinking water standard for nitrate is 10 mg/L. Nitrate concentrations above this level present health risks to certain individuals. Because these wells are a subset of the wells containing nitrate at or above 5 mg/L nitrate concentration, this percentage is always less than or equal to the percentage of wells greater than or equal to 5 mg/L.

Example - 45% of the wells sampled equaled or exceeded 10 mg/L. ($0.45 \times 10 = 4.50$)

The sum of all three factors above gives the final water quality score.

Example - ($1.76 + 3.65 + 4.50 = 9.91$ points)

Water Quality Trends

This criterion considers water quality trends within each priority area. Determining water quality trends for a specific priority area is a complex process requiring a comprehensive analysis of water quality data. For this evaluation, DEQ Technical Services staff followed the process used by IDWR in 2014 to evaluate the nitrate data using statistical methods to determine if scientifically defensible water quality trends are present in the areas (DEQ 2020). Following the

2014 approach (IDWR 2013), instances when a site was sampled multiple times during a time period, DEQ used the most recent value, instead of the maximum value (used in 2008) observed during the time period. The methods used in the 2020 ranking include the following:

- Nonpaired data analyses—Nonpaired data tests are used when some, or all, of the sites in the Time Period 1 (2007–2011) data set are unmatched with the sites in the Time Period 2 (2012–2016) data set.
- Paired data analyses—Paired data tests are used when the same sites have results in Time Period 1 (2007–2011) and Time Period 2 (2012–2016).
- Determining ratios for the number of sites with nitrate increases to the number of decreases (or decreases to increases) greater than 1.0 mg/L between the time periods.

The nitrate trends are classified as *increasing trend*, *increasing tendency*, *no discernable trend*, *decreasing tendency*, and *decreasing trend*. The thresholds for a significant statistical result from the nonpaired and paired tests were confidence levels exceeding 85%. The threshold for the ratio method was a ratio greater than 1.5. The following guidelines were used to determine the trend score.

- If two or three thresholds were met and in agreement, then a Trend existed.
- If only one threshold was met, and other criteria were in agreement, but thresholds were not met, then a Tendency existed.
- If two thresholds were met, but they were not in agreement, there was No Trend.
- If no thresholds were met, there was No Trend.

This criterion will be assigned a maximum value of 10 points. The scoring breakdown is listed below:

- Increasing Trend = 10 points
- Increasing Tendency = 7.5 points
- Static or no discernable trend = 5 points
- Decreasing Tendency = 2.5 points
- Decreasing Trend = 0 points

Figure 1 illustrates the changes in the areas with increasing and decreasing trends for the 2002, 2008, 2014, and 2020 NPAs.

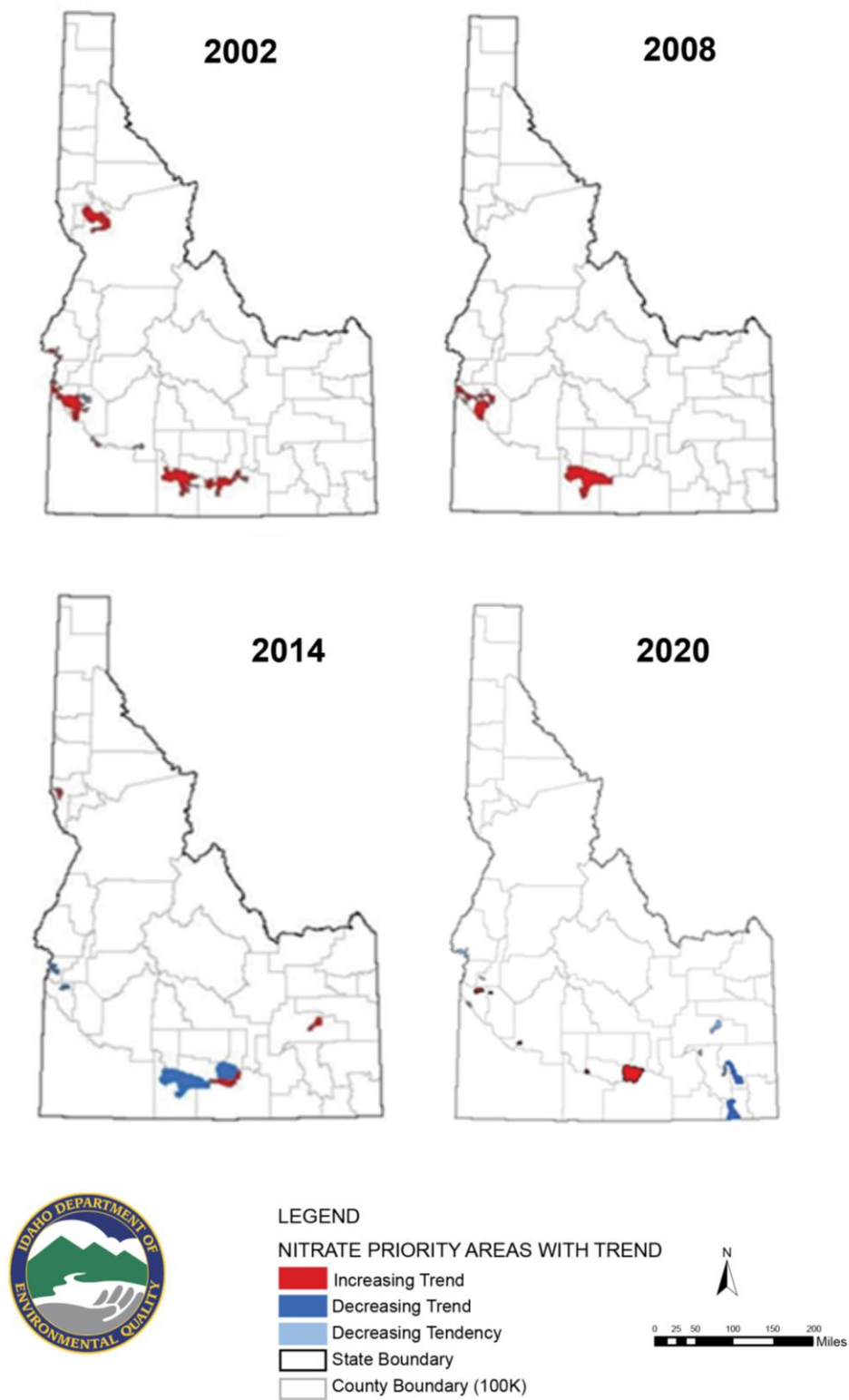


Figure 1. Increasing and decreasing trends for 2002, 2008, 2014, and 2020.

Secondary Criterion

Other Beneficial Use

The "Other Beneficial Use" criterion is included in the process. This factor does not appear to be an issue in any of the existing NPAs except for Twin Falls aquaculture. When other beneficial uses are impacted, two points will be added to the score. Aquaculture is an example of a beneficial use potentially impacted by elevated nitrates.

Example: No other beneficial uses = 0 points

Total Example Score = 8 + 9.91 + 10 + 0 = 27.91

For clarity the final score is rounded to the nearest whole number - 28

2020 Scoring Results

NPAs are ranked and categorized according to a rounded numerical score, with higher scores representing areas of greater concern. The 2020 NPAs were delineated in 2018 and finalized in 2019. In October 2020, the trend analysis was finalized, and the scoring and categorizing (*High Priority*, *Moderate–High Priority*, and *Moderate Priority*) were completed. These three categories were added to this evaluation to direct awareness to the areas most in need of improvement. Using categories with set intervals also identifies how the number of areas in each category changes over time. Rounded scores of 0–14 fall into the *Moderate Priority* category; scores of 15–19 fall in the *Moderate–High Priority* category; and scores of 20 and greater are in the *High Priority* category.

Table 1 summarizes numerical factors, and the trend and score with the new categorization (*High Priority*, *Moderate–High Priority*, and *Moderate Priority*) for each area. Figure 2 illustrates the 2020 NPAs statewide with the areas listed by category. Appendices A–E contain a regional map (with 2014 areas to compare any changes in the boundaries), and individual NPA maps, data summaries, and the ranking score sheets for five of the six DEQ regional offices (Coeur d’Alene Regional Office does not currently have an NPA).

Significant changes in scores for some NPAs occurred between the 2014 and 2020 NPA evaluations. The differences are attributable to changes in the water quality and trend components of the score. Concerns were raised in 2014 that a change in the NPA boundary could impact the trend component of the score. To eliminate potential impacts from any boundary changes between the 2014 and 2020 evaluations, the 2014 NPA boundaries were used to complete the 2020 trend analysis. Examples from the NPAs that had the greatest changes in score between 2014 and 2020 (Table 2) are provided below.

- The NE Star NPA scored 18.59 (ranked #9) in 2014 and scored 24.28 (ranked #1) in 2020.
 - A no trend score was calculated for 2014, and an increasing trend score was calculated for this iteration (based on the data from Time Period 1 (2007–2011) and Time Period 2 (2012–2016). Trend result increased the score by 5 points.
- The Marsh Creek NPA scored 27.28 (ranked #1) in 2014 and 21.56 (ranked #5) in 2020.

- An increasing trend score was calculated in 2014, and a no trend score was calculated in 2020 (based on the data from Time Period 1 and Time Period 2). Trend result decreased the score by 5 points.
- The Minidoka NPA scored 13.36 (ranked #25) in 2014 and 23.15 (ranked #3) in 2020.
 - A decreasing trend score was calculated in 2014, and an increasing trend score was calculated in 2020 (based on the data from Time Period 1 and Time Period 2). Trend result increased the score by 10 points.
- The NE Canyon County NPA (previously Purple Sage NPA) scored 10.74 (ranked #34) in 2014 and 21.35 (ranked #6) in 2020.
 - A decreasing trend score was calculated in 2014, and an increasing trend score was calculated in 2020 (based on the data from Time Period 1 and Time Period 2). Trend result increased the score by 10 points.
- The Mountain Home Air Force Base NPA scored 16.63 (ranked #12) in 2014 and 23.98 (ranked #2) in 2020.
 - A no trend score was calculated in 2014, and an increasing trend score was calculated in 2020 (based on the data from Time Period 1 and Time Period 2). Trend result increased the score by 5 points.
- The Lower Payette NPA scored 11.96 (ranked #31) in 2014 and 17.52 (ranked #18) in 2020.
 - A decreasing trend score was calculated in 2014, and no trend score was calculated in 2020 (based on the data from Time Period 1 and Time Period 2). Trend result increased the score by 5 points.
- The South Fremont Co. NPA scored 12.71 (ranked #26) in 2014 and 18.75 (ranked #12) in 2020.
 - There was no change in trend between evaluations; however, changes in water quality (percentage of sites ≥ 2 mg/L, ≥ 5 mg/L, and ≥ 10 mg/L) changed the score. Score increased by 6 points.
- The Preston NPA scored 16.60 (ranked #13) in 2014 and 10.36 (ranked #33) in 2020.
 - A no trend score was calculated in 2014, and a decreasing trend score was calculated in 2020 (based on the data from Time Period 1 and Time Period 2). Trend result decreased the score by 5 points.
- The Blackfoot NPA scored 19.51 (ranked #6) in 2014 and 13.19 (ranked #26) in 2020.
 - An increasing trend score was calculated in 2014, and a decreasing tendency score was calculated in 2020 (based on the data from Time Period 1 and Time Period 2). Trend result increased the score by 7.5 points.

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Table 1. 2020 ranked nitrate priority areas with score components.

Name	Region	Acres	Sq. Miles	Population	Number of Sites	Max. Nitrate	Average Nitrate	Median	PWS Wells	PWS SWA	# ≥ 2mg/L	% ≥ 2mg/L	# ≥ 5mg/L	% ≥ 5mg/L	# ≥ 10mg/L	% ≥ 10mg/L	2007-2016 Trend*	2020 Score	Rounded 2020 Score	2020 Rank
NE STAR	BRO	3,180	5	357	47	44	12.2	7.7	2	5	35	74	29	62	22	47	Increasing Trend	24.28	24	1
MOUNTAIN HOME AFB	BRO	5,983	9	3,238	33	27.9	9.4	7.8	7	6	31	94	25	76	11	33	Increasing Trend	23.98	24	2
MINIDOKA	TFRO	145,083	227	18,605	347	83	5.1	4.3	48	75	227	65	142	41	27	8	Increasing Trend	23.15	23	3
FORT HALL	PRO	17,277	27	1,158	17	23.6	11.7	11.0	3	5	16	94	14	82	10	59	Ins. Data/No Trend	21.88	22	4
MARSH CREEK	TFRO	101,345	158	18,084	403	40	6.8	5.8	55	46	354	88	242	60	81	20	No Trend	21.76	22	5
NE CANYON CO. (PURPLE S.)	BRO	18,653	29	4,847	176	27	5.9	5.4	32	27	149	85	94	53	17	10	Increasing Trend	21.35	21	6
WEISER	BRO	21,462	34	7,393	150	60	12.0	10.1	26	24	130	87	118	79	75	50	Decreasing Tendency	21.19	21	7
ADA CANYON	BRO	251,883	394	205,419	1117	38.4	5.1	4.2	274	339	837	75	462	41	130	12	No Trend	19.75	20	8
TWIN FALLS	TFRO	363,687	568	76,293	719	41	4.9	4.7	111	91	621	86	315	44	30	4	No Trend	19.32	19	9
SW JEROME CO.	TFRO	7,901	12	615	30	30	7.4	5.0	0	0	29	97	15	50	5	17	Increasing Trend	19.14	19	10
GRAND VIEW	BRO	9,173	14	596	32	110	13.3	8.2	2	2	30	94	26	81	13	41	Ins. Data/No Trend	19.03	19	11
SOUTH FREMONT CO.	IFRO	4,964	8	156	13	38	14.5	7.9	0	4	11	85	9	69	6	46	Ins. Data/No Trend	18.75	19	12
BLACK CLIFFS	PRO	1,030	2	493	28	28.68	10.3	9.8	2	2	19	68	17	61	14	50	Ins. Data/No Trend	18.41	18	13
ASHTON/DRUMMOND	IFRO	145,111	227	2,367	209	38.3	7.3	6.4	12	16	187	89	148	71	35	17	No Trend	18.03	18	14
CLEARWATER PLATEAU	LRO	268,361	419	3,760	138	52	6.4	4.2	18	22	98	71	61	44	31	22	No Trend	17.82	18	15
NOTUS	BRO	4,288	7	211	20	16	7.6	7.3	1	1	17	85	16	80	6	30	Ins. Data/No Trend	17.7	18	16
LAPWAI CREEK	LRO	49,168	77	1,163	37	18.8	7.4	6.6	5	10	28	76	23	62	11	30	Ins. Data/No Trend	17.62	18	17
LOWER PAYETTE	BRO	26,205	41	7,214	207	61	6.3	4.4	23	37	148	71	96	46	38	18	No Trend	17.52	18	18
BRUNEAU	BRO	13,420	21	32	8	92	22.6	13.1	0	0	7	88	6	75	4	50	Ins. Data/No Trend	17.51	18	19
LINDSAY CREEK	LRO	26,246	41	13,212	65	21	5.6	4.3	19	19	42	65	31	48	15	23	No Trend	17.00	17	20
GLENNS FERRY	BRO	13,398	21	1,578	17	73.3	12.1	6.5	3	2	14	82	11	65	5	29	Ins. Data/No Trend	16.79	17	21
MOUNTAIN HOME	BRO	2,014	3	480	53	40	9.6	5.5	3	3	46	87	29	55	17	32	Ins. Data/No Trend	16.69	17	22
MINK CREEK	PRO	1,576	2	643	34	21	5.4	4.0	6	30	23	68	15	44	8	24	Ins. Data/No Trend	15.96	16	23
HOMEDALE	BRO	8,765	14	1,753	40	17.1	5.4	3.4	9	14	22	55	17	43	10	25	Ins. Data/No Trend	15.75	16	24
PARMA	BRO	4,980	8	998	30	16	5.7	5.2	5	6	19	63	16	53	8	27	Ins. Data/No Trend	15.61	16	25
BLACKFOOT	PRO	32,620	51	1,979	22	16	5.5	5.4	3	24	17	77	12	55	3	14	Decreasing Tendency	13.19	13	26
MALAD	PRO	22,379	35	2,803	16	11.51	3.3	2.6	4	4	8	50	4	25	2	13	Ins. Data/No Trend	12.55	13	27
MUD LAKE	IFRO	111,709	175	1,682	97	26	4.3	4.2	18	14	73	75	30	31	5	5	No Trend	12.55	13	28
N. POCATELLO	PRO	5,511	9	23,062	25	8.9	4.4	4.0	26	40	22	88	7	28	2	8	Decreasing Tendency	12.46	12	29
GEORGETOWN_BENN	PRO	17,764	28	795	22	13.3	4.2	2.8	2	2	14	64	10	45	2	9	Ins. Data/No Trend	12.43	12	30
MARSING	BRO	5,994	9	393	35	56	12.3	6.6	3	3	24	69	21	60	14	40	Decreasing Trend	12.38	12	31
BLISS	TFRO	6,218	10	66	24	19	4.6	2.9	0	0	14	58	9	38	4	17	Ins. Data/No Trend	11.76	12	32
PRESTON	PRO	94,761	148	9,856	82	27.75	5.9	4.5	14	18	56	68	39	48	13	16	Decreasing Trend	10.36	10	33
GRACE	PRO	95,693	150	2,737	60	42.57	5.1	2.8	27	19	37	62	18	30	6	10	Decreasing Trend	9.74	10	34
EMMETT NORTH BENCH	BRO	5,414	8	424	40	21	4.6	3.7	1	3	32	80	14	35	2	5	Decreasing Trend	6.85	7	35

*For this iteration, NPA nitrate concentrations between 2007–2011 and 2012–2016 were compared using previously established statistical methods and the threshold criteria analysis (DEQ 2014, Neely 2013). The methods and results of this nitrate trend analysis are presented in Nitrate Priority Area Trend Analysis, 2011–2016, DEQ 2020.

High Priority																				
Moderate - High Priority																				
Moderate Priority																				

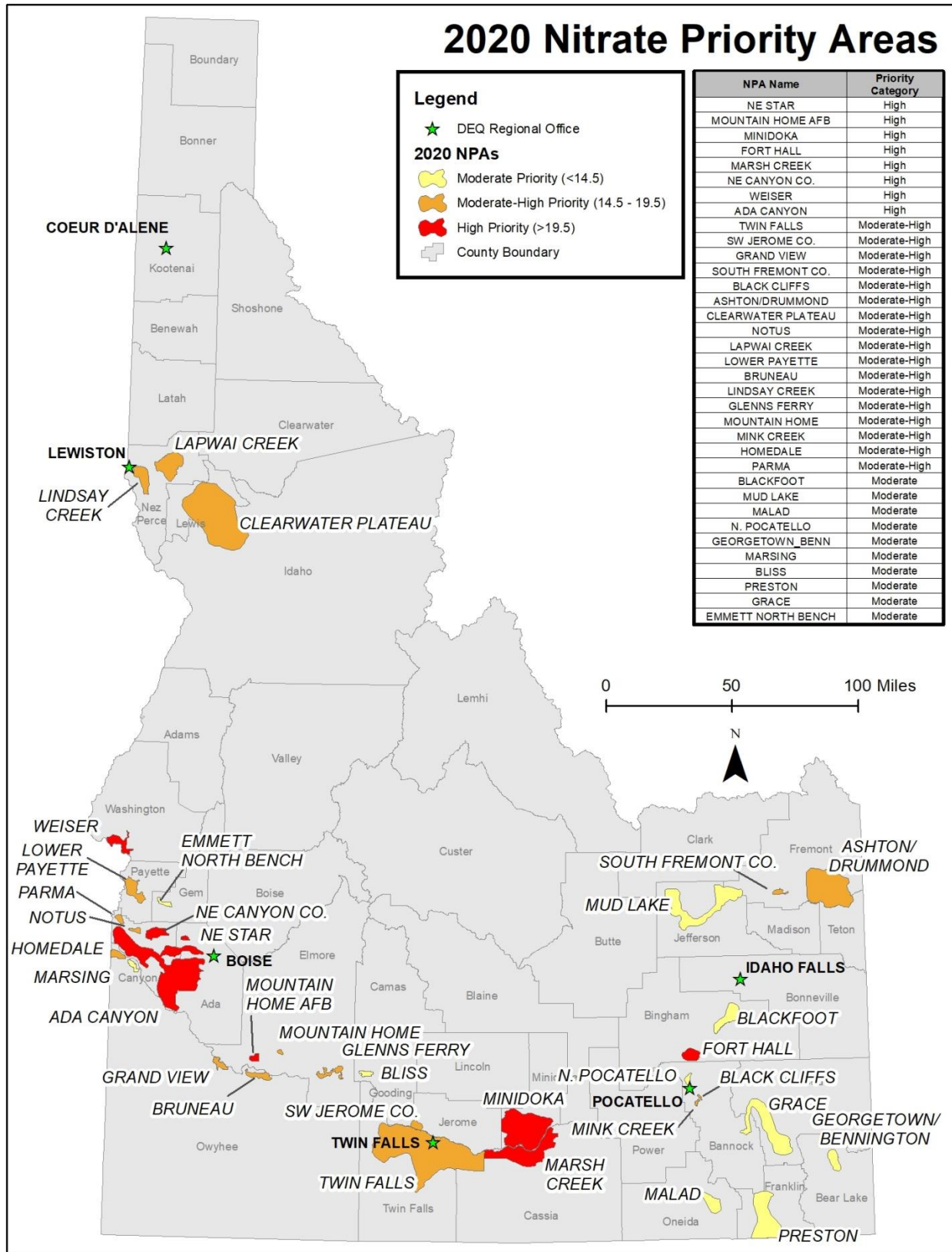


Figure 2. 2020 ranked nitrate priority areas.

Table 2. Selected comparisons of seven NPAs for the four evaluation iterations.

Rank Year	Name	Region	Acres	Square Miles	Population	Total # of Sites	Maximum Nitrate	Average Nitrate	Median	# PWS Wells/SWA	# ≥ 2mg/L	% ≥ 2mg/L	# ≥ 5mg/L	% ≥ 5mg/L	# ≥ 10mg/L	% ≥ 10mg/L	Trend	Score	Rounded 2020 Score	Rank
2002	Eagle/Star	BRO	1,739	3	100	19	45.2	11.63	Unk.	0	11*	58	11*	58	9*	47	No Trend	17.80	NA	11
2008	NE Star	BRO	2,560	4	166	63	48	11.14	7.68	1	42	67	35	56	27	43	Increasing	23.44	NA	5
2014	NE Star	BRO	3,250	5	297	88	54	11.35	7.49	6	61	69	51	58	38	43	No Trend	18.58	NA	9
2020	NE Star	BRO	3,180	5	357	47	44	12.2	7.7	5	35	74	29	62	22	47	Increasing	24.28	24	1
2002	Burley/Marsh Cr.	TFRO	169,563	265	11,787	234	20	6.36	5.8	33	205	88	140	60	40	17	Increasing	26.50	NA	3
2008	Cassia Co.	TFRO	193,280	302	17,525	384	40	6.34	5.74	48	331	86	224	58	65	17	No Trend	20.32	NA	9
2014	Cassia Co.	TFRO	98,788	154	17,977	402	40	7.16	6.43	43	358	89	258	64	91	23	Increasing	27.28	NA	1
2020	MARSH CREEK	TFRO	101,345	158	18,084	403	40	6.8	5.8	55	354	88	242	60	81	20	No Trend	21.76	22	5
2002	Rupert	TFRO	116,780	182	25,132	236	100	5.6	4.4	29	183	78	104	44	18	8	No Trend	19.60	NA	9
2008	Minidoka	TFRO	147,200	230	18,395	319	83	5.35	4.32	56	224	70	131	41	27	8	No Trend	17.25	NA	12
2014	Minidoka	TFRO	147,501	230	18,612	337	83	5.45	4.26	69	230	68	140	41	30	9	Decreasing	13.36	NA	25
2020	Minidoka	TFRO	145,083	227	18,605	347	83	5.08	4.30	75	227	65	142	41	27	8	Increasing	23.15	23	3
2002	Purple Sage	BRO	Not ranked																	
2008	Purple Sage	BRO	14,080	22	2,835	87	22.7	5.26	4.61	25	66	76	38	44	9	10	No Trend	15.00	NA	20
2014	Purple Sage	BRO	16,399	26	4,032	120	27	5.28	4.55	24	92	77	55	46	11	9	Decreasing	10.74	NA	34
2020	NE Canyon Co.	BRO	18,653	29	4,847	176	27	5.85	5.35	32	149	85	94	53	17	10	Increasing	21.35	21	6
2002	MHAFB	BRO	Not ranked																	
2008	MHAFB	BRO	8,960	14	8,903	36	28.9	7	5.41	8	29	81	20	56	8	22	No Trend	16.62	NA	14
2014	MHAFB	BRO	9,242	14	3,250	37	29.2	7.2	5.6	9	33	89	22	59	8	22	No Trend	16.93	NA	12
2020	MHAFB	BRO	5,983	9	3,238	33	27.9	9.43	7.8	7	31	94	25	76	11	33	Increasing	23.98	24	2
2002	Payette	BRO	30,509	48	2,725	74	23.4	6.5	5.6	15	52	70	39	53	15	20	No Trend	18.10	NA	10
2008	Lower Payette	BRO	26,880	42	6,718	119	28	6.05	4.74	25	83	70	57	48	22	19	No Trend	17.70	NA	11
2014	Lower Payette	BRO	28,587	45	8,755	246	61	5.91	4.11	39	169	68	103	42	38	15	Decreasing	11.96	NA	31
2020	Lower Payette	BRO	26,205	41	7,214	207	61	6.28	4.4	37	148	71	96	46	38	18	No Trend	17.52	18	17
2002	St. Anthony	IFRO	6,725	11	2,000	14	37.9	7.6	Unk.	0	6*	43	5*	36	4*	29	No Trend	14.60	NA	16
2008	St. Anthony	IFRO	7,680	12	666	14	42.6	9.46	3.29	5	9	64	5	36	3	21	No Trend	13.18	NA	27
2014	S. Fremont	IFRO	7,693	12	979	15	35	8.47	3.5	6	8	53	5	33	3	20	No Trend	12.71	NA	26
2020	S. Fremont	IFRO	4,964	8	156	13	38	14.47	7.92		11	85	9	69	6	46	Ins. Data/No Trend	18.75	19	12
2002	Preston/Cache Valley	PRO	129,115	202	620	61	18.7	3.2	Unk.	10	33	54	14	23	3	5	No Trend	11.70	NA	22
2008	Preston	PRO	106,880	167	8,178	59	30.8	5.15	4.19	23	40	68	24	41	6	10	No Trend	15.41	NA	19
2014	Preston	PRO	124,409	194	11,120	72	23.8	4.74	4.01	24	47	65	29	40	9	13	No Trend	16.60	NA	13
2020	Preston	PRO	94,761	148	9,856	82	27.75	5.86	4.50	18	56	68	39	48	13	16	Decreasing	10.36	10	33
2002	Blackfoot	PRO	Not ranked																	
2008	Blackfoot	PRO	15,360	24	1,100	15	16	6.98	5.64	13	15	100	9	60	3	20	No Trend	15.00	NA	20
2014	Blackfoot	PRO	41,540	65	3,218	30	16	4.68	4.03	29	25	83	13	43	2	7	Increasing	19.51	NA	6
2020	Blackfoot	PRO	32,620	51	1,979	22	16	5.49	5.38	24	17	77	12	55	3	14	D. Tendency	13.19	13	26

* Calculated from % identified in 2002 report

Notes: Unk = Unknown. Information was not provided in 2002 summary

High Priority

Moderate-High Priority

Moderate Priority

Appendix A. Lewiston Region 2020 Nitrate Priority Area

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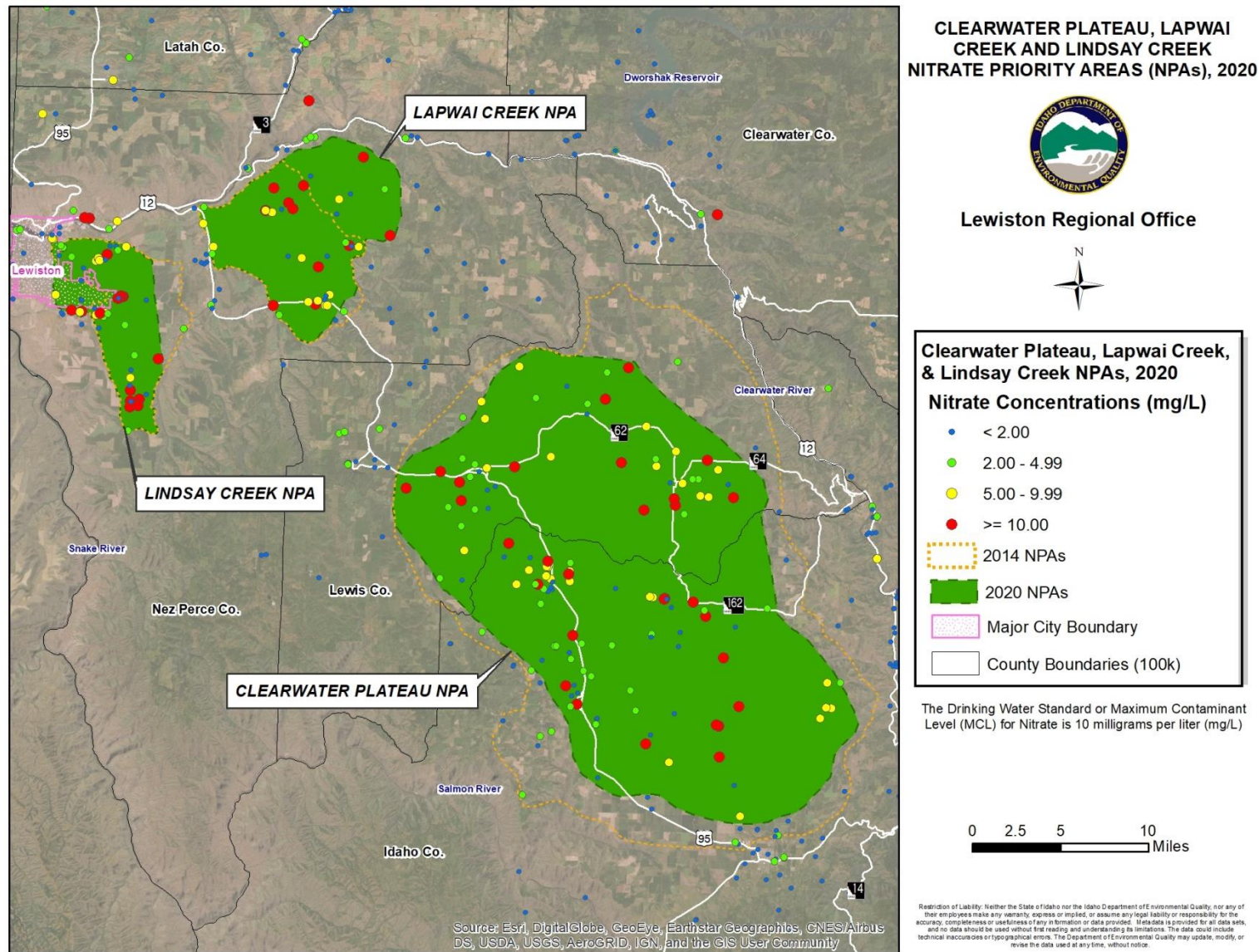


Figure A-1. Clearwater Plateau, Lapwai Creek, and Lindsay Creek NPA boundaries.

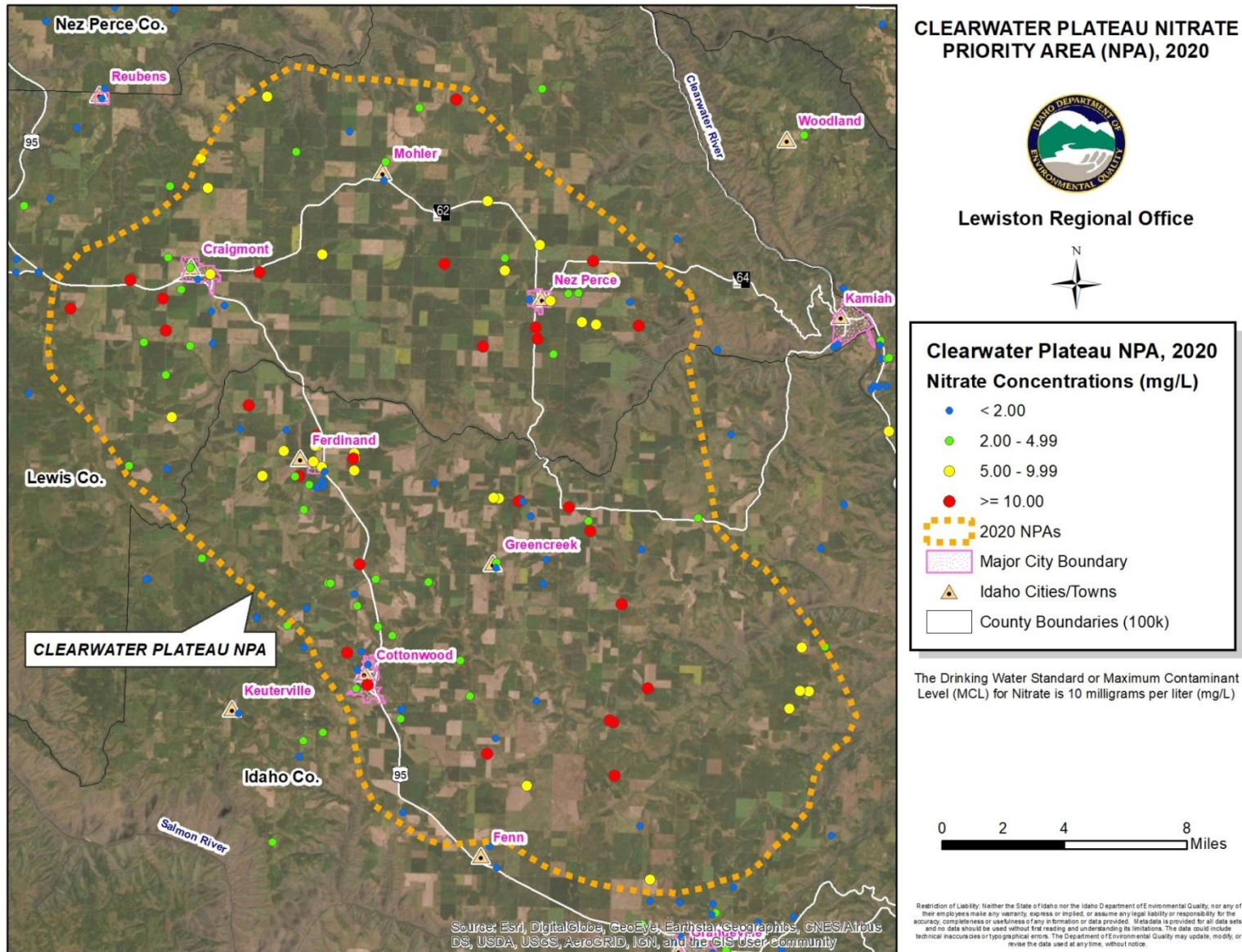


Figure A-2. Clearwater Plateau NPA 2020 nitrate concentrations.

Table A-1. 2020 Clearwater Plateau NPA summary and scoring sheet.

2020 Clearwater Plateau NPA Summary	
DEQ Region	LRO
Size of NPA (acres)	268,361
Size of NPA (square miles)	419
Population within the NPA*	3,760
Number of Sites Sampled	138
Maximum Nitrate Value (mg/L)	52
Average Nitrate Value (mg/L)	6.4
Median (middle) Nitrate Value (mg/L)	4.2
Number of Public Water System sources within NPA	18
Number of source water assessment delineations intersecting the NPA	22
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	98
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	71
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	61
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	44
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	31
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	22
Number of Sites Sampled by DEQ**	84
Number of Sites Sampled by IDWR	15
Number of Sites Sampled by USGS	3
Number of Sites Sampled by ISDA***	36
2020 Trend	No Trend
2020 Total Score	17.82
Final Rounded 2020 Score	18
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Clearwater Plateau		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	3,760
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2	x	2	22
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	2	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3	x	3	22
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	3	
(Max. Possible Score for Section 1 = 10)		Population Score Total	7	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.71	2	1.42	
Percent of wells with NO ₃ ≥ 5 mg/l	0.44	5	2.2	
Percent of wells with NO ₃ ≥ 10 mg/l	0.22	10	2.2	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	5.82	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	17.82	
		Final Ranking Score*	18	

*Total score rounded to nearest whole number.

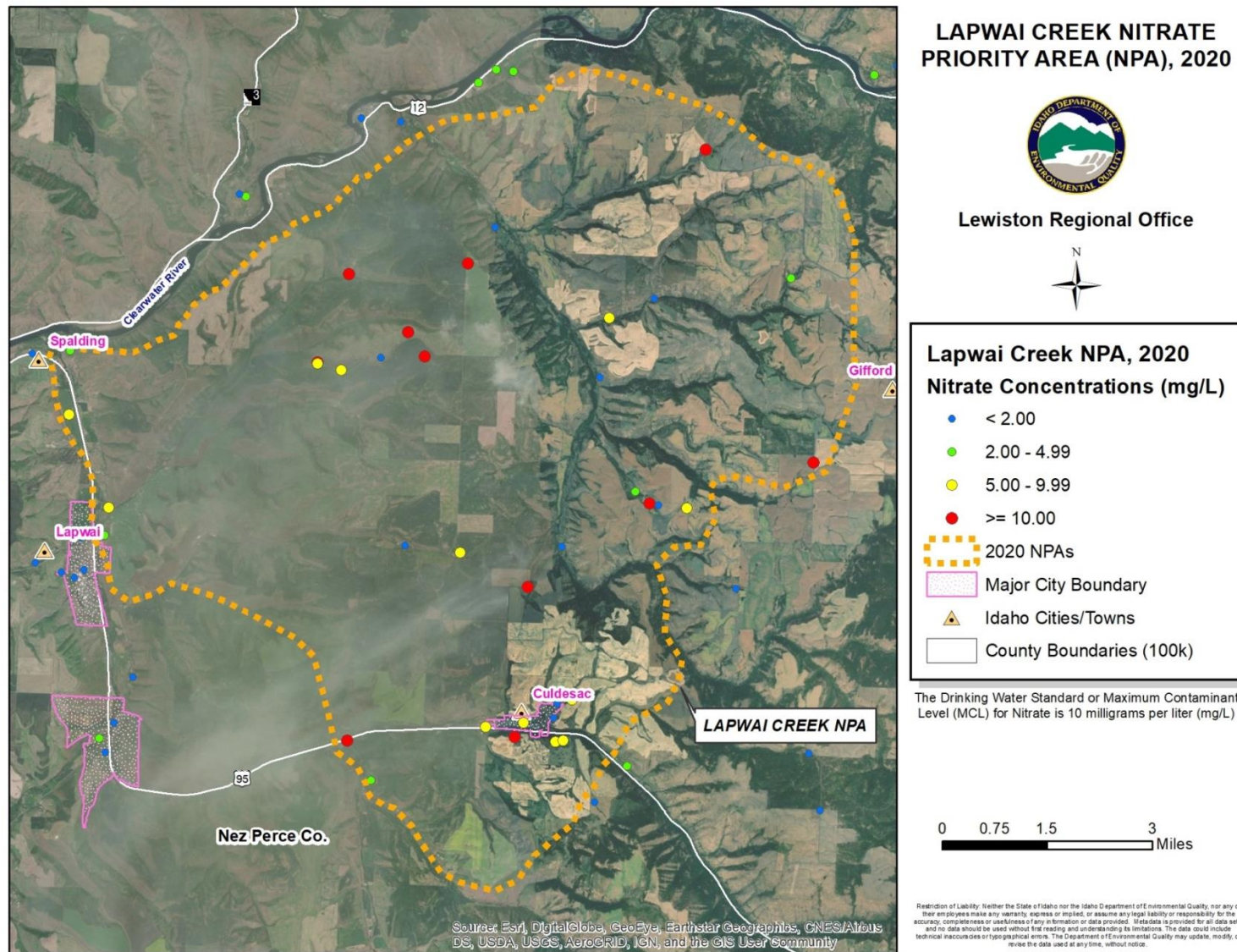


Figure A-3. Lapwai Creek NPA 2020 nitrate concentrations.

Table A-2. 2020 Lapwai Creek NPA summary and scoring sheet.

2020 Lapwai Creek NPA Summary	
DEQ Region	LRO
Size of NPA (acres)	49,168
Size of NPA (square miles)	77
Population within the NPA*	1,163
Number of Sites Sampled	37
Maximum Nitrate Value (mg/L)	18.8
Average Nitrate Value (mg/L)	7.4
Median (middle) Nitrate Value (mg/L)	6.6
Number of Public Water System sources within NPA	5
Number of source water assessment delineations intersecting the NPA	10
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	28
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	76
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	23
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	62
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	11
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	30
Number of Sites Sampled by DEQ**	24
Number of Sites Sampled by IDWR	4
Number of Sites Sampled by USGS	1
Number of Sites Sampled by ISDA***	8
2020 Trend	Ins. Data/No Trend
2020 Total Score	17.62
Final Rounded 2020 Score	18
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Lapwai Creek		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	1,163
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	10
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	11
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	5	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.76	2	1.52	
Percent of wells with NO ₃ ≥ 5 mg/l	0.62	5	3.1	
Percent of wells with NO ₃ ≥ 10 mg/l	0.30	10	3	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	7.62	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Ins. Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	17.62	
		Final Ranking Score*	18	

*Total score rounded to nearest whole number.

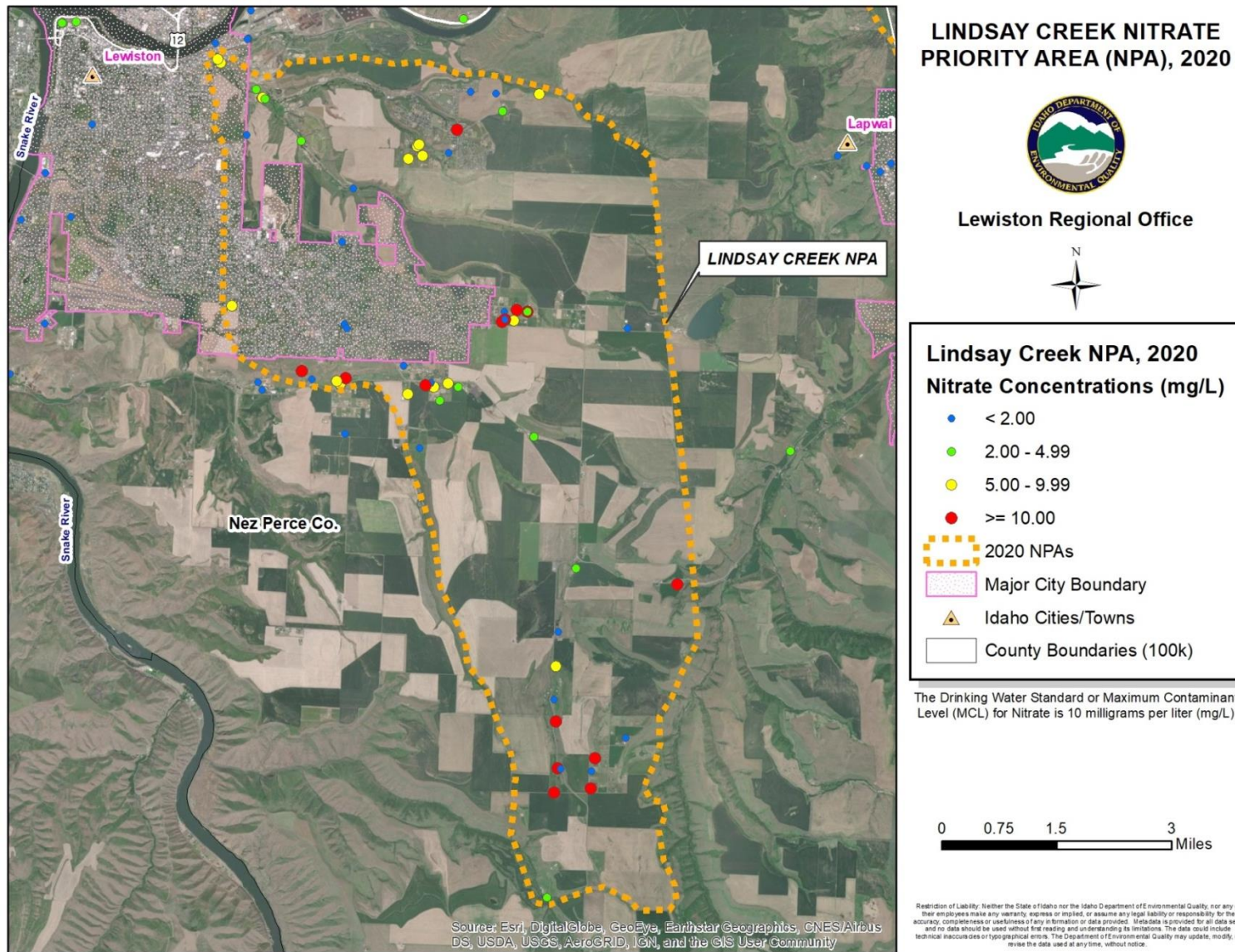


Figure A-4. Lindsay Creek NPA 2020 nitrate concentrations.

Table A-3. 2020 Lindsay Creek NPA summary and scoring sheet.

2020 Lindsay Creek NPA Summary	
DEQ Region	LRO
Size of NPA (acres)	26,246
Size of NPA (square miles)	41
Population within the NPA*	13,212
Number of Sites Sampled	65
Maximum Nitrate Value (mg/L)	21
Average Nitrate Value (mg/L)	5.6
Median (middle) Nitrate Value (mg/L)	4.3
Number of Public Water System sources within NPA	19
Number of source water assessment delineations intersecting the NPA	19
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	42
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	65
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	31
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	48
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	15
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	23
Number of Sites Sampled by DEQ**	48
Number of Sites Sampled by IDWR	2
Number of Sites Sampled by USGS	0
Number of Sites Sampled by ISDA***	15
2020 Trend	No Trend
2020 Total Score	17.00
Final Rounded 2020 Score	17
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Lindsay Creek		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2			
>10,001	3	x	3	13,212
(Max. Possible Score for Section 1a = 3)		Subtotal	3	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	19
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	15
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	6	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.65	2	1.3	
Percent of wells with NO ₃ ≥ 5 mg/l	0.48	5	2.4	
Percent of wells with NO ₃ ≥ 10 mg/l	0.23	10	2.3	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	6.0	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	No Trend
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	17.00	
		Final Ranking Score*	17	

*Total score rounded to nearest whole number.

Appendix B. Boise Region 2020 Nitrate Priority Area

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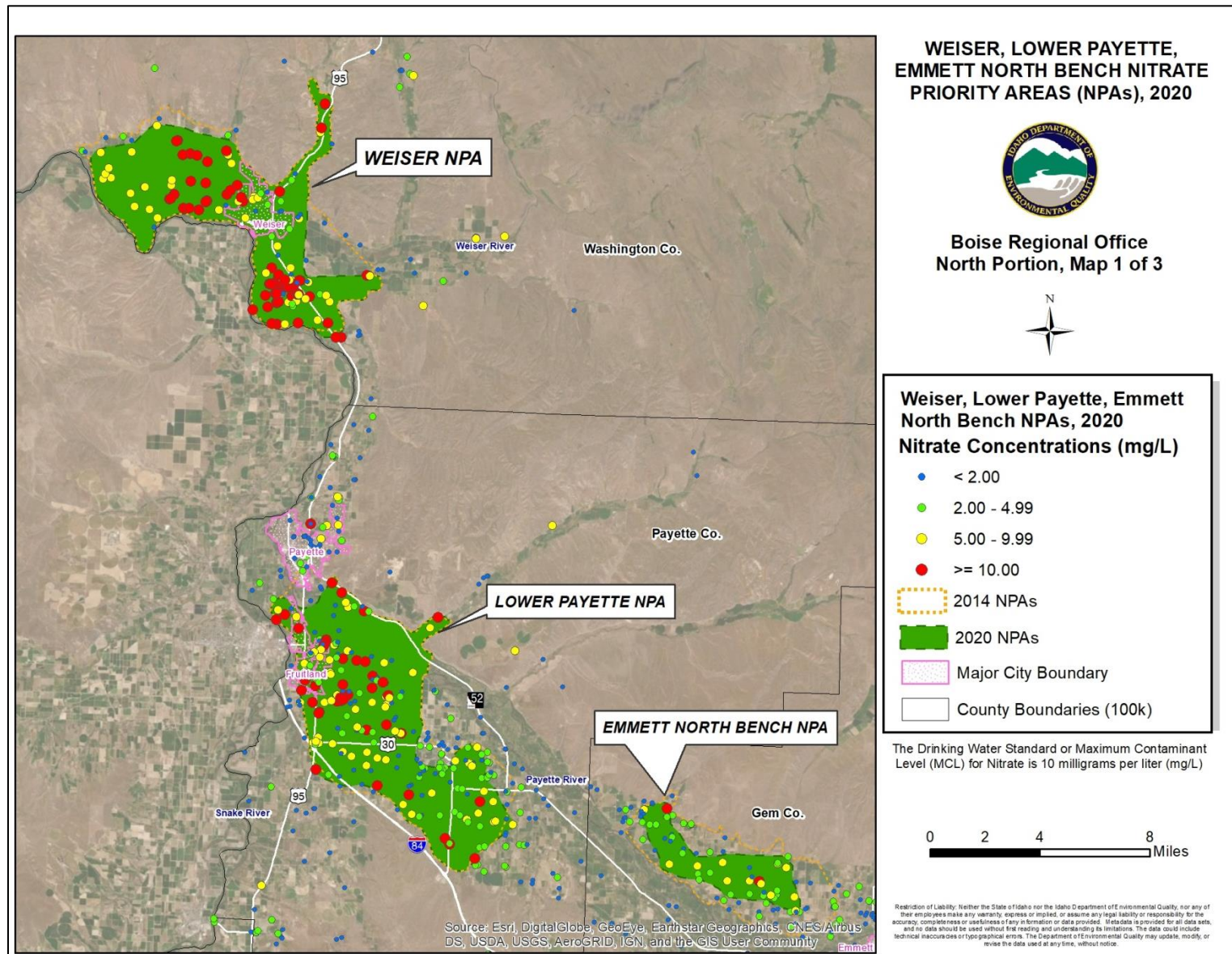


Figure B-1. Weiser, Lower Payette, and Emmett North Bench NPAs—north portion boundaries.

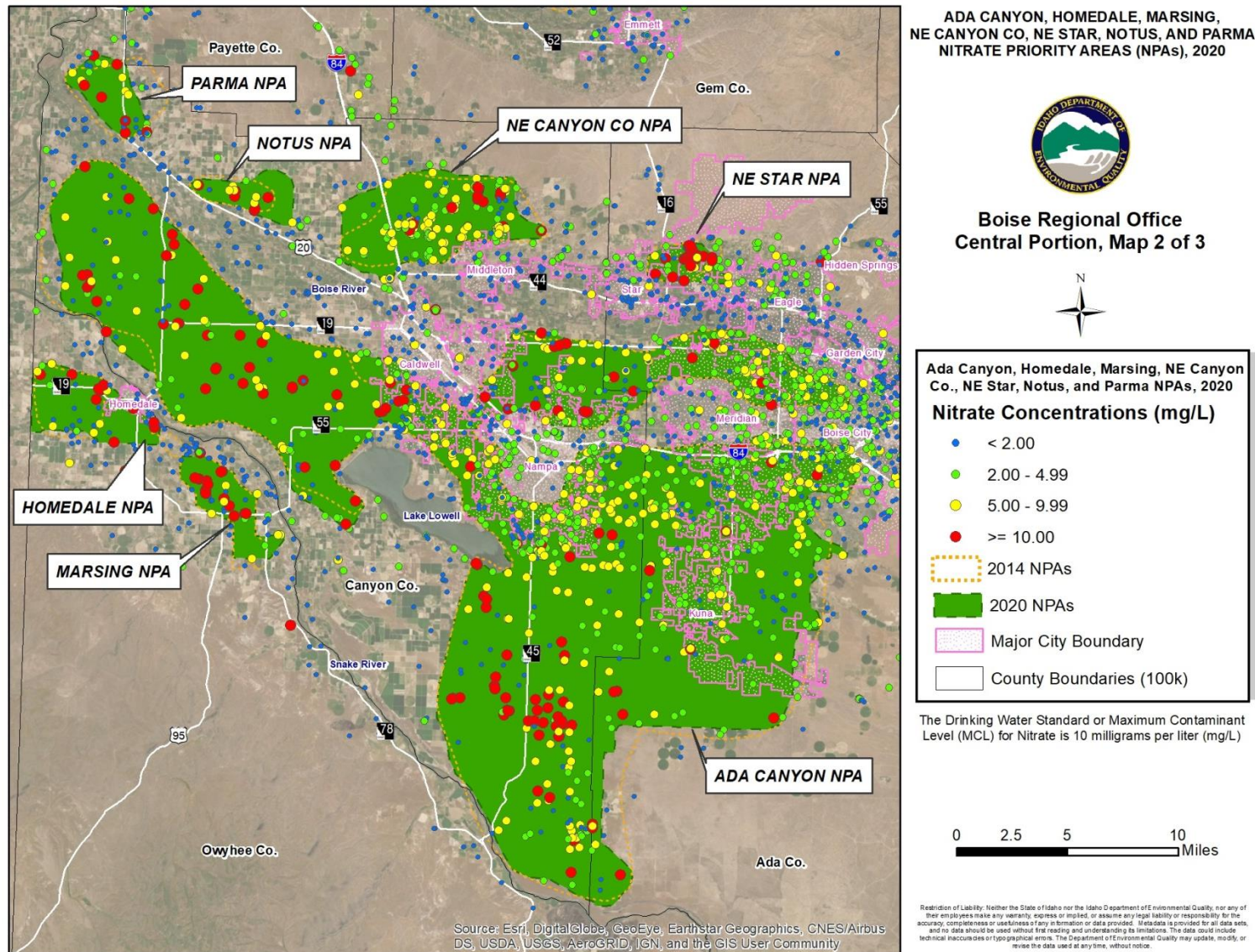


Figure B-2. Weiser, Lower Payette, and Emmett North Bench NPAs—central portion boundaries.

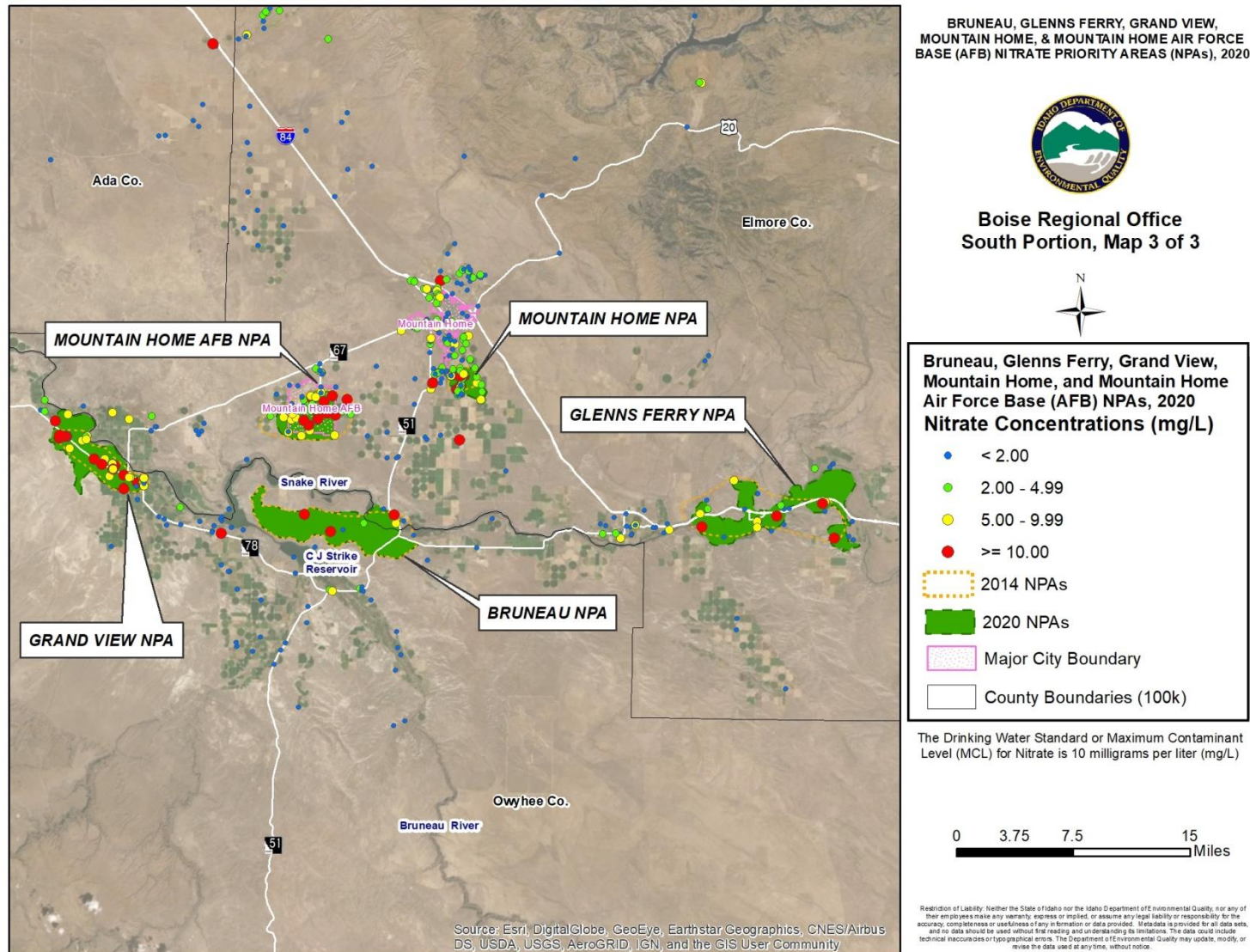


Figure B-3. Bruneau, Glenn's Ferry, Grand View, Mountain Home, and Mountain Home Air Force Base NPAs—south portion boundaries.

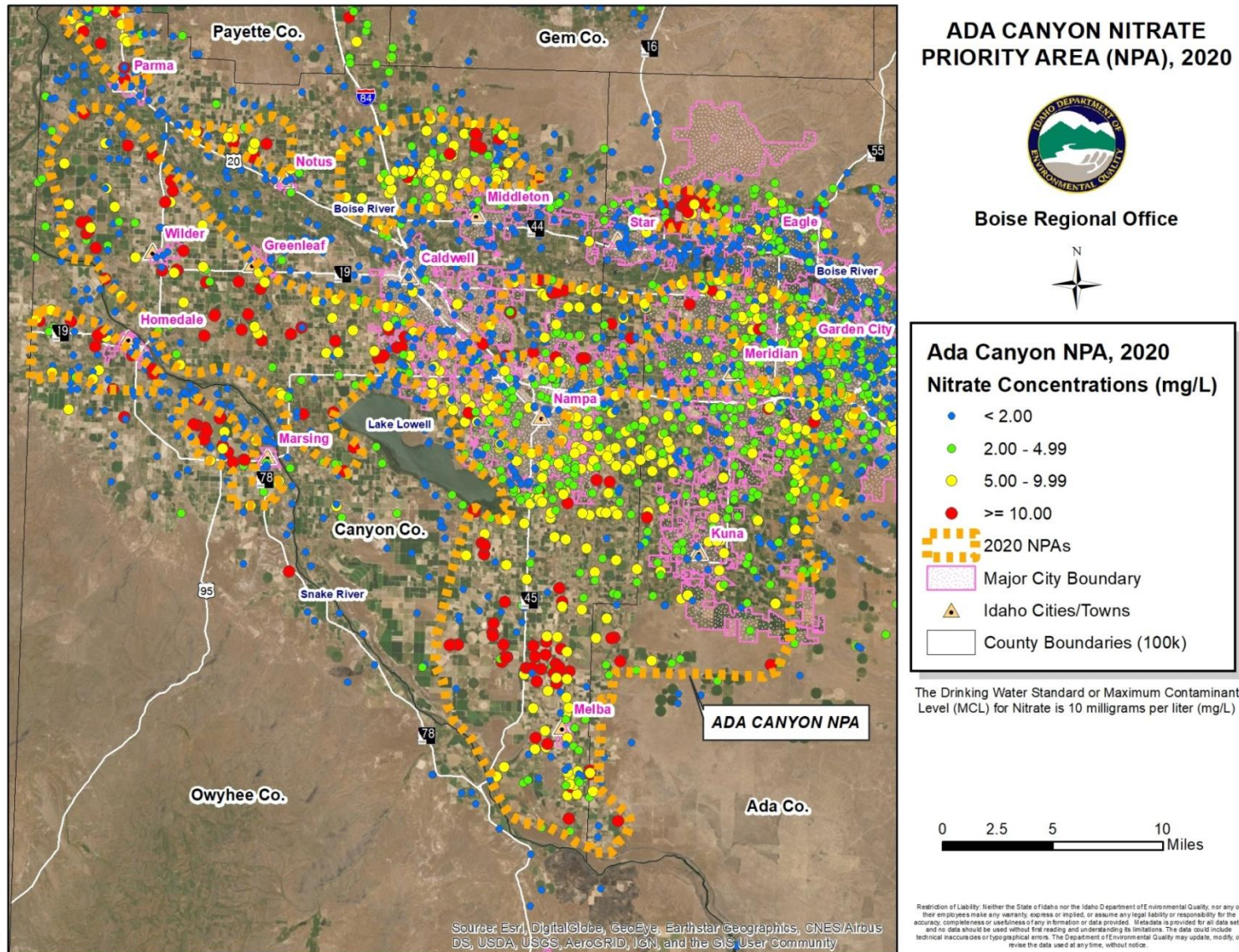


Figure B-4. Ada-Canyon NPA 2020 nitrate concentrations.

Table B-1. Ada-Canyon NPA summary and scoring sheet.

2020 Ada Canyon NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	251,883
Size of NPA (square miles)	394
Population within the NPA*	205,419
Number of Sites Sampled	1117
Maximum Nitrate Value (mg/L)	38.4
Average Nitrate Value (mg/L)	5.1
Median (middle) Nitrate Value (mg/L)	4.2
Number of Public Water System sources within NPA	274
Number of source water assessment delineations intersecting the NPA	339
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	837
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	75
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	462
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	41
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	130
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	12
Number of Sites Sampled by DEQ**	455
Number of Sites Sampled by IDWR	116
Number of Sites Sampled by USGS	390
Number of Sites Sampled by ISDA***	156
2020 Trend	No Trend
2020 Total Score	19.75
Final Rounded 2020 Score	20
Priority Category	Moderate-High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Ada-Canyon		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2			
>10,001	3	x	3	205,419
(Max. Possible Score for Section 1a = 3)		Subtotal	3	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2			
>40	3	x	3	339 SWAs
(Max. Possible Score for Section 1b = 3)		Subtotal	3	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3			
>40	4	x	4	130
(Max. Possible Score for Section 1c = 4)		Subtotal	4	
(Max. Possible Score for Section 1 = 10)		Population Score Total	10	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	.75	2	1.5	
Percent of wells with NO ₃ ≥ 5 mg/l	.41	5	2.05	
Percent of wells with NO ₃ ≥ 10 mg/l	.12	10	1.2	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	4.75	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5.0	
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	5.0	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	19.75	
		Final Ranking Score*	20	

*Total score rounded to nearest whole number.

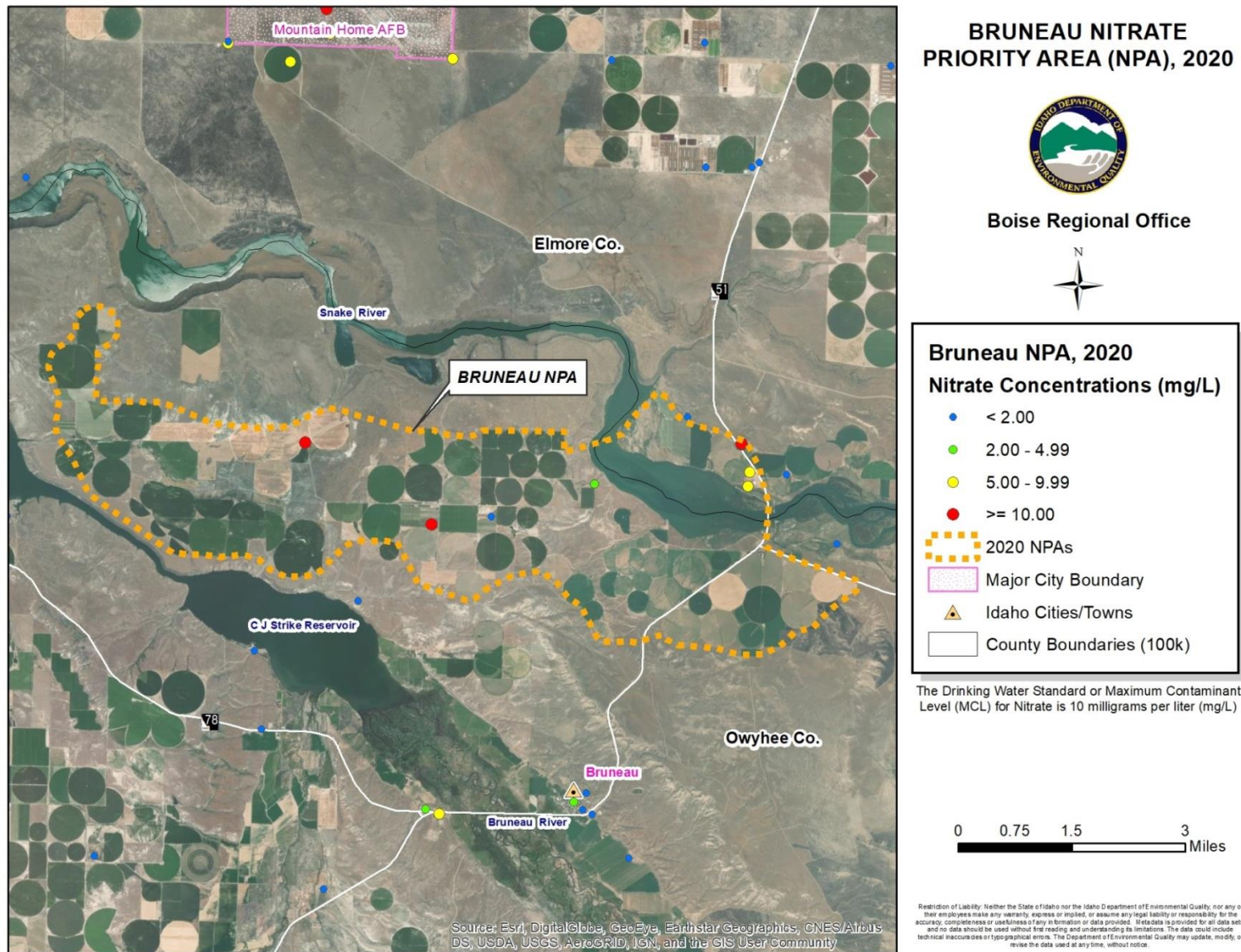


Figure B-5. Bruneau NPA 2020 nitrate concentrations.

Table B-2. 2020 Bruneau NPA summary and scoring sheet.

2020 Bruneau NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	13,420
Size of NPA (square miles)	21
Population within the NPA*	32
Number of Sites Sampled	8
Maximum Nitrate Value (mg/L)	92
Average Nitrate Value (mg/L)	22.6
Median (middle) Nitrate Value (mg/L)	13.1
Number of Public Water System sources within NPA	0
Number of source water assessment delineations intersecting the NPA	0
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	7
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	88
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	6
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	75
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	4
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	50
Number of Sites Sampled by DEQ**	3
Number of Sites Sampled by IDWR	3
Number of Sites Sampled by USGS	1
Number of Sites Sampled by ISDA***	1
2020 Trend	Ins. Data/No Trend
2020 Total Score	17.51
Final Rounded 2020 Score	18
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Bruneau		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	32
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0	x	0	
1 to 20	1			
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	0	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	4
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	2	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.88	2	1.76	
Percent of wells with NO ₃ ≥ 5 mg/l	0.75	5	3.75	
Percent of wells with NO ₃ ≥ 10 mg/l	0.50	10	5	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	10.51	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Insufficient Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
Total Score 17.51				
(Max Possible Total Score = 38)		Final Ranking Score*	18	

*Total score rounded to nearest whole number.

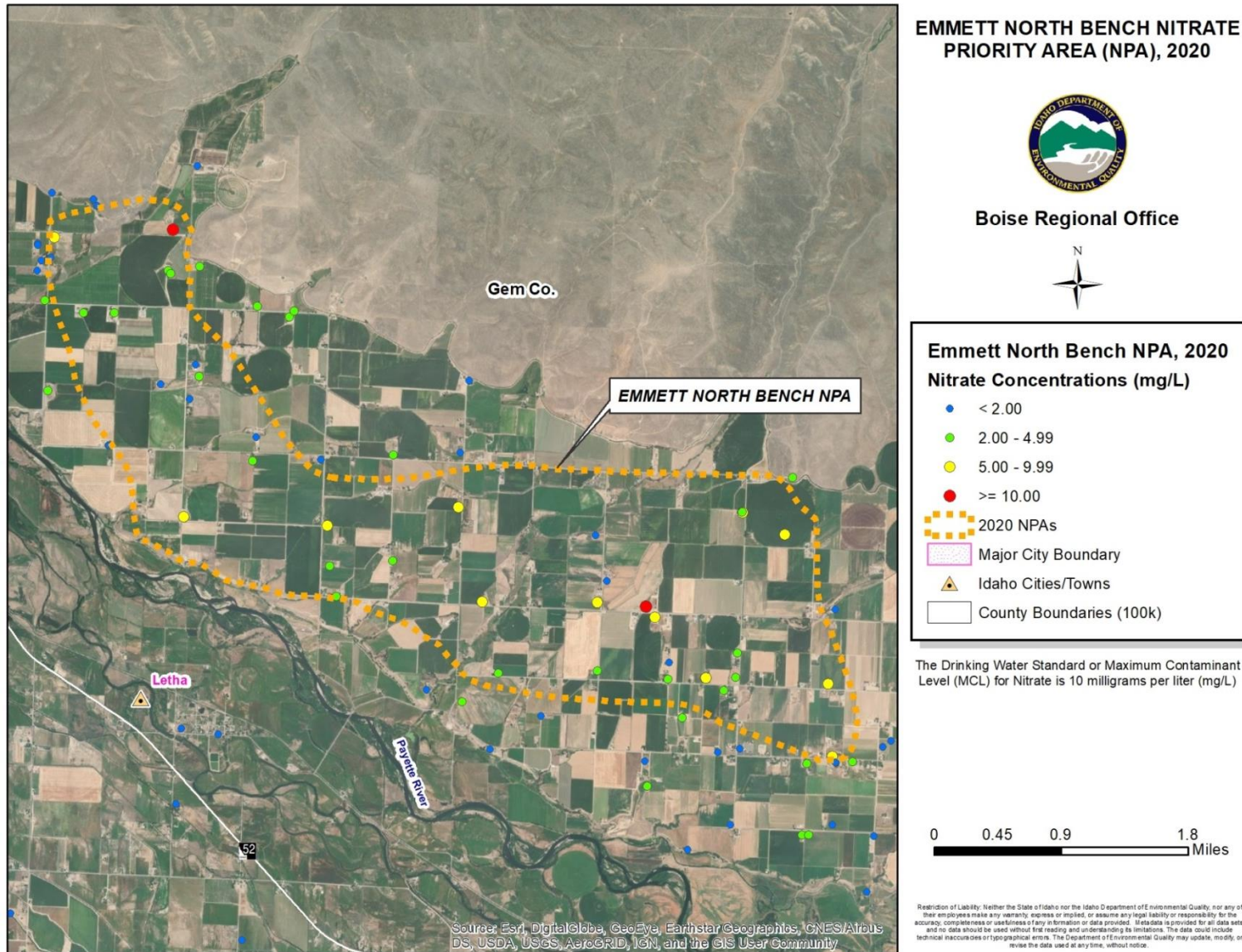


Figure B-6. Emmett North Bench NPA 2020 nitrate concentrations.

Table B-3. 2020 Emmett North Bench NPA summary and scoring sheet.

2020 Emmett North Bench NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	5,414
Size of NPA (square miles)	8
Population within the NPA*	424
Number of Sites Sampled	40
Maximum Nitrate Value (mg/L)	21
Average Nitrate Value (mg/L)	4.6
Median (middle) Nitrate Value (mg/L)	3.7
Number of Public Water System sources within NPA	1
Number of source water assessment delineations intersecting the NPA	3
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	32
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	80
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	14
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	35
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	2
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	5
Number of Sites Sampled by DEQ**	23
Number of Sites Sampled by IDWR	2
Number of Sites Sampled by USGS	5
Number of Sites Sampled by ISDA***	10
2020 Trend	Decreasing Trend
2020 Total Score	6.85
Final Rounded 2020 Score	7
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Emmett North Bench		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	424
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	3
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	2
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	3	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.80	2	1.6	
Percent of wells with NO ₃ ≥ 5 mg/l	0.35	5	1.75	
Percent of wells with NO ₃ ≥ 10 mg/l	0.05	10	0.5	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	3.85	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0	x	0	Decreasing Trend
(Max Possible Score for Section 3 = 10)		Trend Score	0	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	6.85	
		Final Ranking Score*	7	

*Total score rounded to nearest whole number.

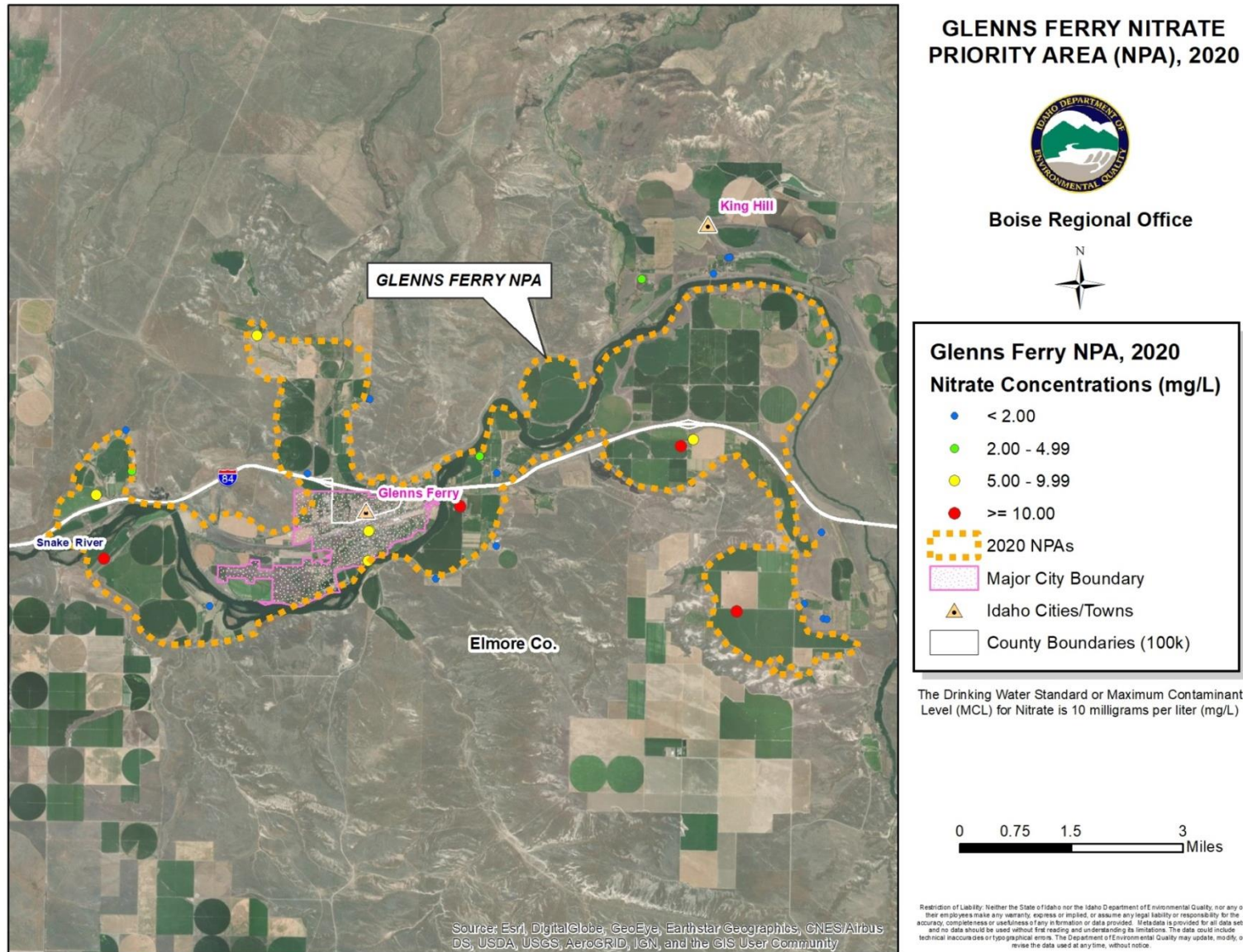


Figure B-7. Glenns Ferry NPA nitrate concentrations.

Table B-4. 2020 Glenns Ferry NPA summary and scoring sheet.

2020 Glenns Ferry NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	13,398
Size of NPA (square miles)	21
Population within the NPA*	1,578
Number of Sites Sampled	17
Maximum Nitrate Value (mg/L)	73.3
Average Nitrate Value (mg/L)	12.1
Median (middle) Nitrate Value (mg/L)	6.5
Number of Public Water System sources within NPA	3
Number of source water assessment delineations intersecting the NPA	2
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	14
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	82
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	11
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	65
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	5
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	29
Number of Sites Sampled by DEQ**	5
Number of Sites Sampled by IDWR	5
Number of Sites Sampled by USGS	1
Number of Sites Sampled by ISDA***	6
2020 Trend	Ins. Data/No Trend
2020 Total Score	16.79
Final Rounded 2020 Score	17
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Glenns Ferry		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	1,578
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	3
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	4
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.82	2	1.64	
Percent of wells with NO ₃ ≥ 5 mg/l	0.65	5	3.25	
Percent of wells with NO ₃ ≥ 10 mg/l	0.29	10	2.9	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	7.79	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Insufficient Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
Total Score 16.79				
(Max Possible Total Score = 38)		Final Ranking Score*	17	

*Total score rounded to nearest whole number.

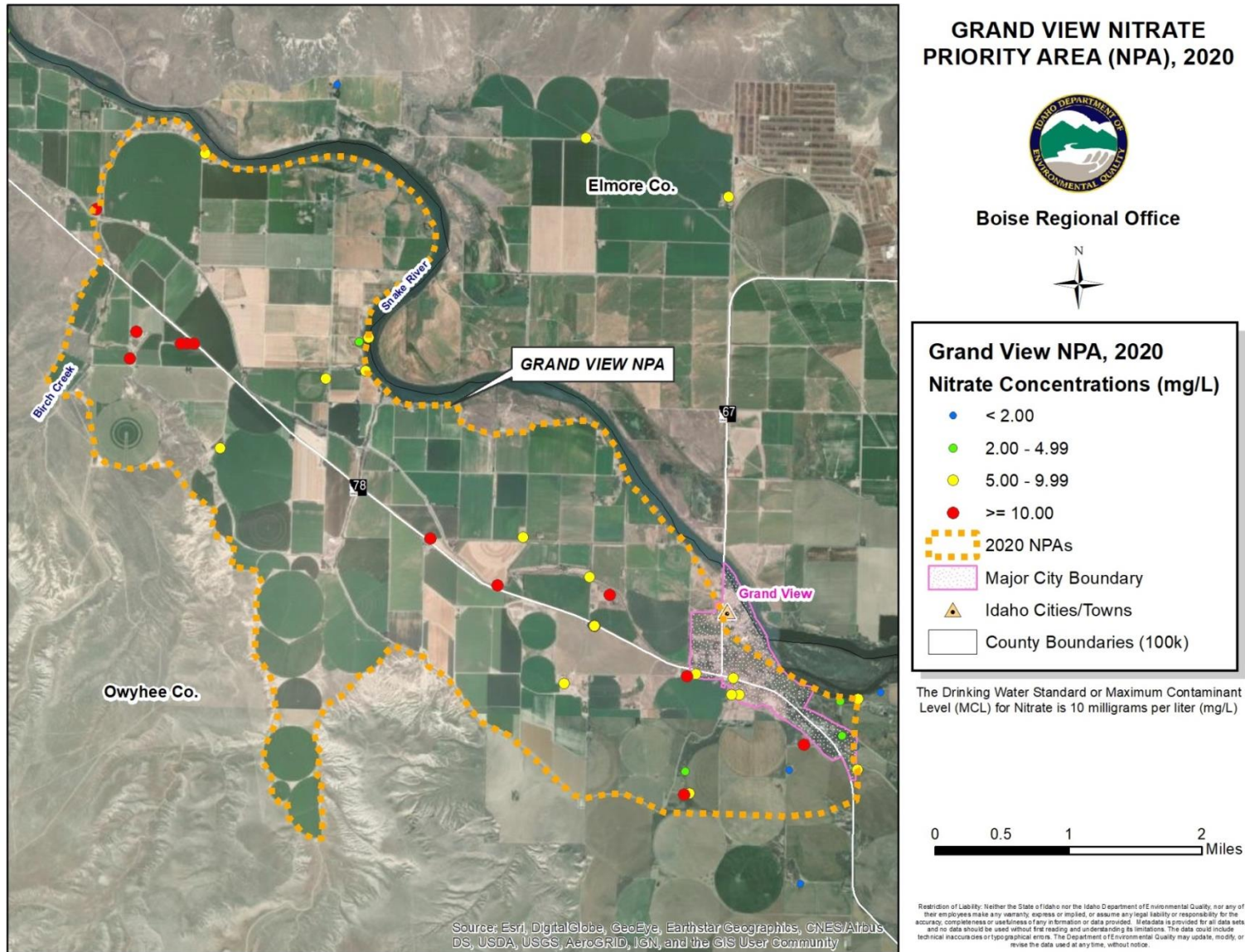


Figure B-8. Grand View NPA 2020 nitrate concentrations.

Table B-5. 2020 Grand View NPA summary and scoring sheet.

2020 Grand View NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	9,173
Size of NPA (square miles)	14
Population within the NPA*	596
Number of Sites Sampled	32
Maximum Nitrate Value (mg/L)	110
Average Nitrate Value (mg/L)	13.3
Median (middle) Nitrate Value (mg/L)	8.2
Number of Public Water System sources within NPA	2
Number of source water assessment delineations intersecting the NPA	2
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	30
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	94
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	26
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	81
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	13
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	41
Number of Sites Sampled by DEQ**	17
Number of Sites Sampled by IDWR	0
Number of Sites Sampled by USGS	1
Number of Sites Sampled by ISDA***	14
2020 Trend	Ins. Data/No Trend
2020 Total Score	19.03
Final Rounded 2020 Score	19
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Grand View		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	596
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	2
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	13
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.94	2	1.88	
Percent of wells with NO ₃ ≥ 5 mg/l	0.81	5	4.05	
Percent of wells with NO ₃ ≥ 10 mg/l	0.41	10	4.1	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	10.03	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Insufficient Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
Total Score 19.03				
Final Ranking Score* 19				

*Total score rounded to nearest whole number.

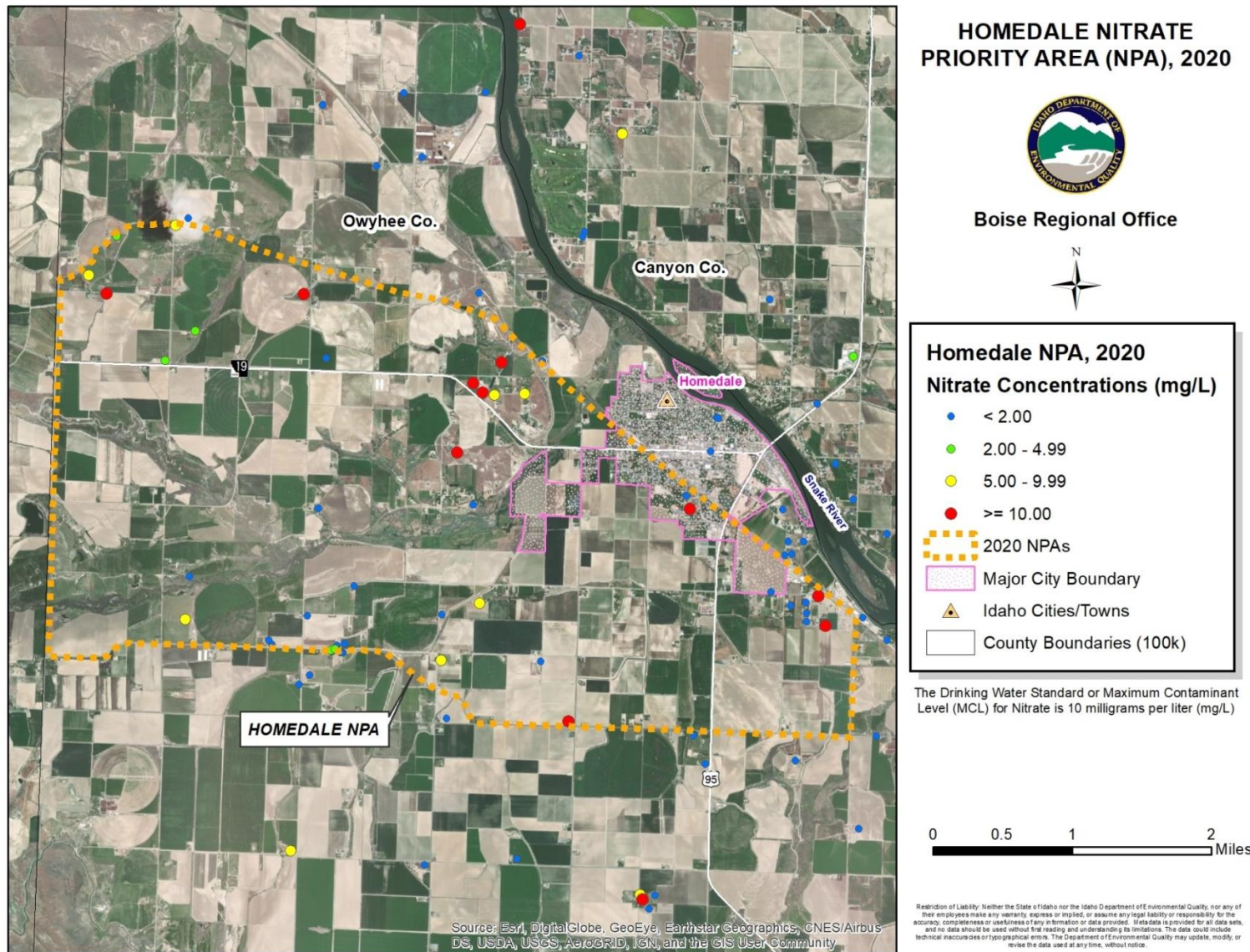


Figure B-9. Homedale NPA 2020 nitrate concentrations.

Table B-6. 2020 Homedale NPA summary and scoring sheet.

2020 Homedale NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	8,765
Size of NPA (square miles)	14
Population within the NPA*	1,753
Number of Sites Sampled	40
Maximum Nitrate Value (mg/L)	17.1
Average Nitrate Value (mg/L)	5.4
Median (middle) Nitrate Value (mg/L)	3.4
Number of Public Water System sources within NPA	9
Number of source water assessment delineations intersecting the NPA	14
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	22
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	55
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	17
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	43
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	10
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	25
Number of Sites Sampled by DEQ**	21
Number of Sites Sampled by IDWR	1
Number of Sites Sampled by USGS	2
Number of Sites Sampled by ISDA***	16
2020 Trend	Ins. Data/No Trend
2020 Total Score	15.75
Final Rounded 2020 Score	16
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Homedale		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	1,753
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	14
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	10
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	5	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.55	2	1.1	
Percent of wells with NO ₃ ≥ 5 mg/l	0.43	5	2.15	
Percent of wells with NO ₃ ≥ 10 mg/l	0.25	10	2.5	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	5.75	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Ins. Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	15.75	
		Final Ranking Score*	16	

*Total score rounded to nearest whole number.

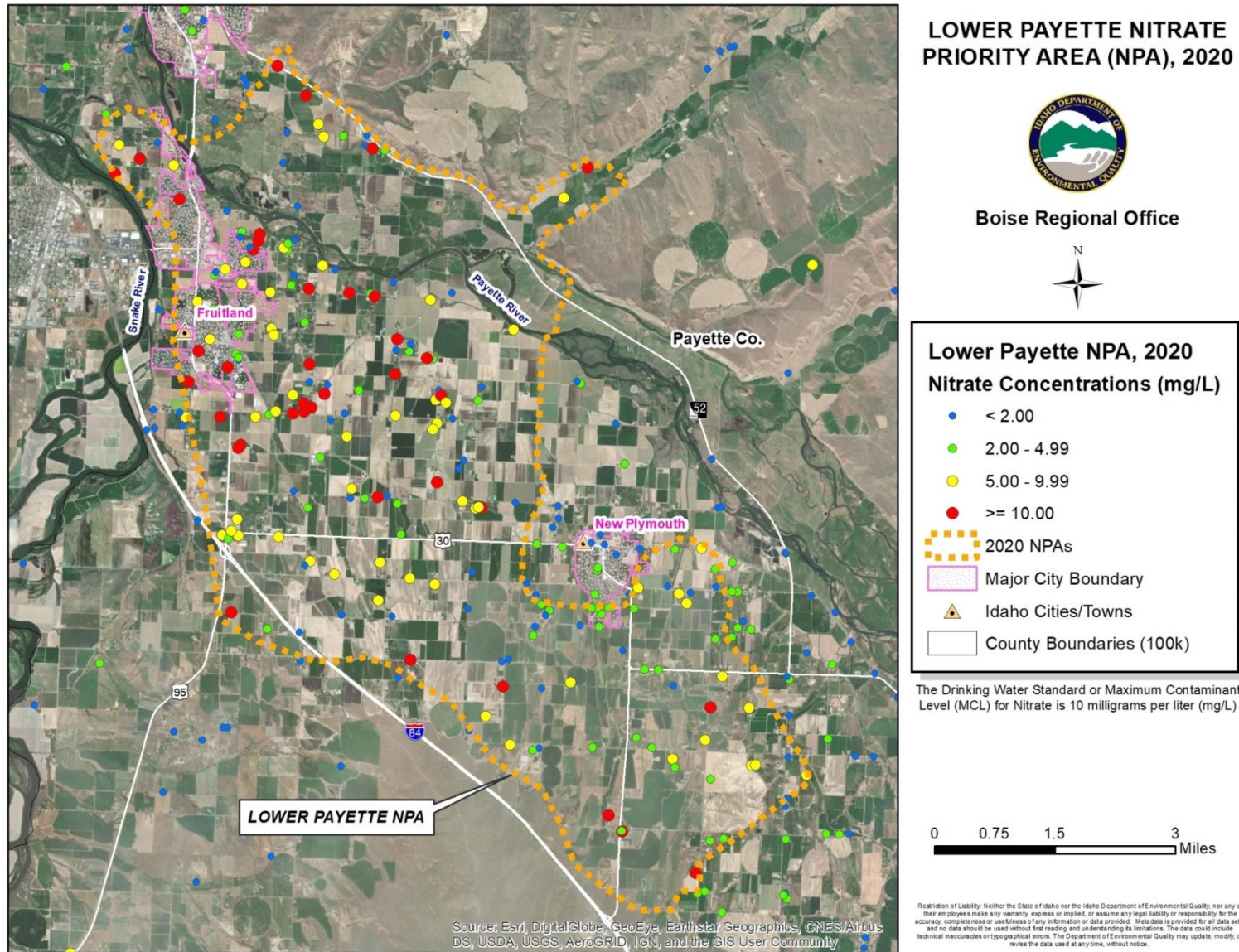


Figure B-10. Lower Payette NPA 2020 nitrate concentrations.

Table B-7. 2020 Lower Payette NPA summary and scoring sheet.

2020 Lower Payette NPA	
DEQ Region	BRO
Size of NPA (acres)	26,205
Size of NPA (square miles)	41
Population within the NPA*	7,214
Number of Sites Sampled	207
Maximum Nitrate Value (mg/L)	61
Average Nitrate Value (mg/L)	6.3
Median (middle) Nitrate Value (mg/L)	4.4
Number of Public Water System sources within NPA	23
Number of source water assessment delineations intersecting the NPA	37
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	148
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	71
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	96
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	46
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	38
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	18
Number of Sites Sampled by DEQ**	152
Number of Sites Sampled by IDWR	6
Number of Sites Sampled by USGS	0
Number of Sites Sampled by ISDA***	49
2020 Trend	No Trend
2020 Total Score	17.52
Final Rounded 2020 Score	18
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Lower Payette		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	7,214
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2	x	2	37
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	2	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3	x	3	38
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	3	
(Max. Possible Score for Section 1 = 10)		Population Score Total	7	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.71	2	1.42	
Percent of wells with NO ₃ ≥ 5 mg/l	0.46	5	2.3	
Percent of wells with NO ₃ ≥ 10 mg/l	0.18	10	1.8	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	5.52	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	No Trend
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	17.52	
		Final Ranking Score*	18	

*Total score rounded to nearest whole number.

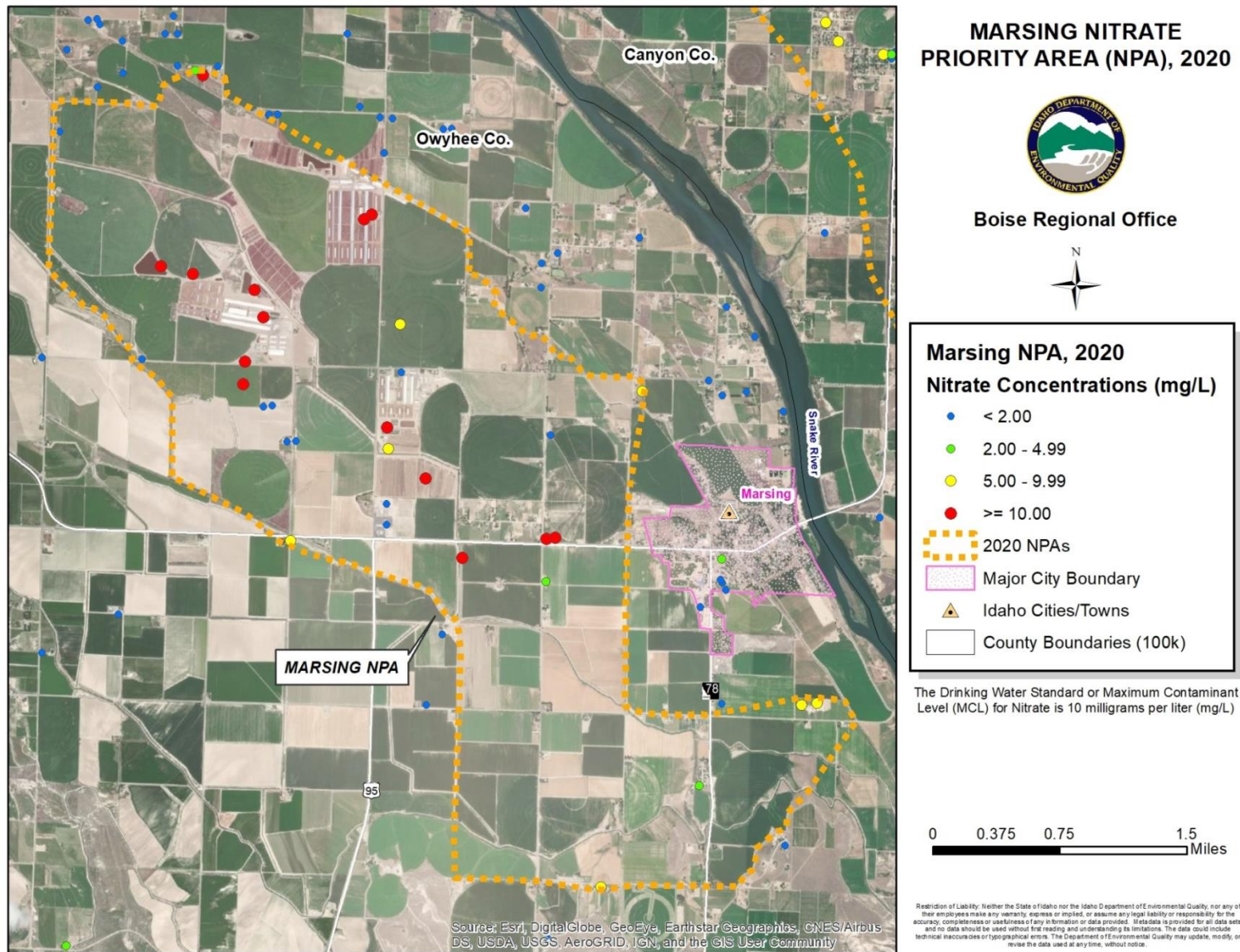


Figure B-11. Marsing NPA 2020 nitrate concentrations.

Table B-8. 2020 Marsing NPA summary and scoring sheet.

2020 Marsing NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	5,994
Size of NPA (square miles)	9
Population within the NPA*	393
Number of Sites Sampled	35
Maximum Nitrate Value (mg/L)	56
Average Nitrate Value (mg/L)	12.3
Median (middle) Nitrate Value (mg/L)	6.6
Number of Public Water System sources within NPA	3
Number of source water assessment delineations intersecting the NPA	3
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	24
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	69
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	21
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	60
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	14
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	40
Number of Sites Sampled by DEQ**	14
Number of Sites Sampled by IDWR	0
Number of Sites Sampled by USGS	1
Number of Sites Sampled by ISDA***	20
2020 Trend	Decreasing Trend
2020 Total Score	12.38
Final Rounded 2020 Score	12
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Marsing		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	393
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	3
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	14
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.69	2	1.38	
Percent of wells with NO ₃ ≥ 5 mg/l	0.60	5	3	
Percent of wells with NO ₃ ≥ 10 mg/l	0.40	10	4	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	8.38	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0	x	0	Decreasing Trend
(Max Possible Score for Section 3 = 10)		Trend Score	0	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
Total Score 12.38				
Final Ranking Score* 12				

*Total score rounded to nearest whole number.

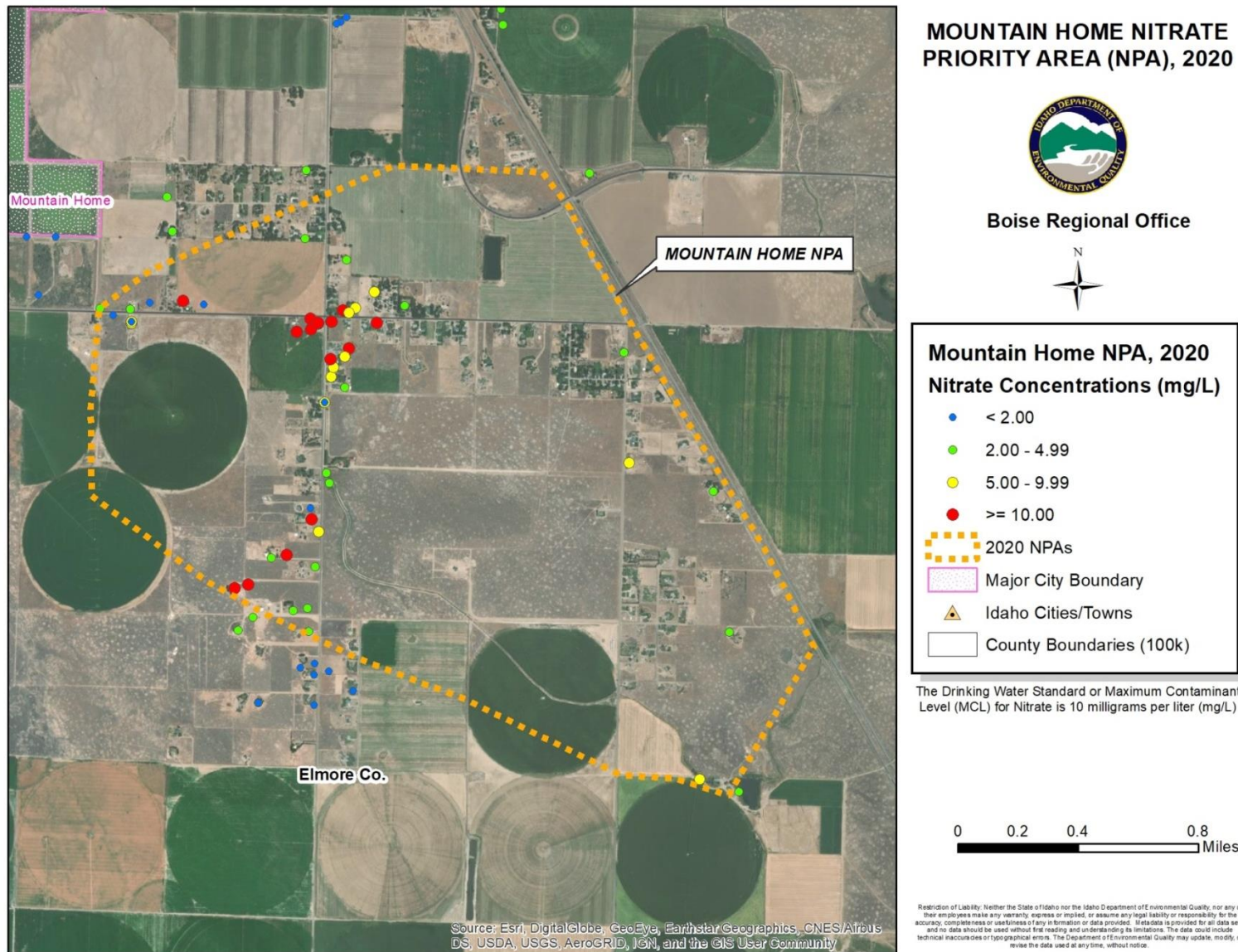


Figure B-12. Mountain Home NPA 2020 nitrate concentrations.

Table B-9. 2020 Mountain Home NPA summary and scoring sheet.

2020 Mountain Home NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	2,014
Size of NPA (square miles)	3
Population within the NPA*	480
Number of Sites Sampled	53
Maximum Nitrate Value (mg/L)	40
Average Nitrate Value (mg/L)	9.6
Median (middle) Nitrate Value (mg/L)	5.5
Number of Public Water System sources within NPA	3
Number of source water assessment delineations intersecting the NPA	3
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	46
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	87
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	29
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	55
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	17
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	32
Number of Sites Sampled by DEQ**	23
Number of Sites Sampled by IDWR	3
Number of Sites Sampled by USGS	0
Number of Sites Sampled by ISDA***	27
2020 Trend	Ins. Data/No Trend
2020 Total Score	16.69
Final Rounded 2020 Score	17
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Mountain Home		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	480
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	3
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	17
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.87	2	1.74	
Percent of wells with NO ₃ ≥ 5 mg/l	0.55	5	2.75	
Percent of wells with NO ₃ ≥ 10 mg/l	0.32	10	3.2	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	7.69	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5.0	Ins. Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)				
Total Score			16.69	
Final Ranking Score*			17	

*Total score rounded to nearest whole number.

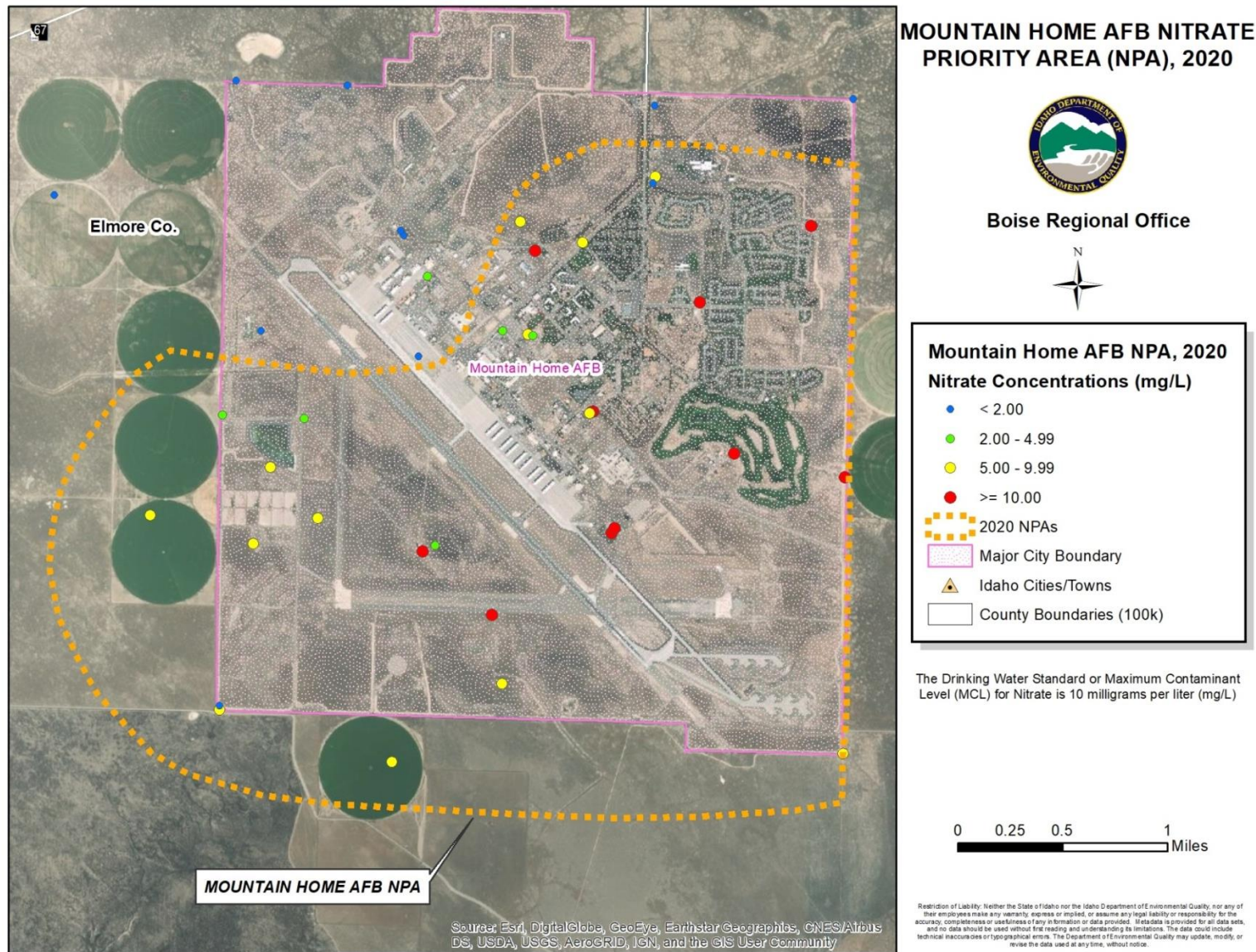


Figure B-13. Mountain Home Air Force Base NPA 2020 nitrate concentrations.

Table B-10. 2020 Mountain Home Air Force Base NPA summary and scoring sheet.

2020 Mountain Home Air Force Base NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	5,983
Size of NPA (square miles)	9
Population within the NPA*	3,238
Number of Sites Sampled	33
Maximum Nitrate Value (mg/L)	27.9
Average Nitrate Value (mg/L)	9.4
Median (middle) Nitrate Value (mg/L)	7.8
Number of Public Water System sources within NPA	7
Number of source water assessment delineations intersecting the NPA	6
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	31
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	94
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	25
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	76
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	11
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	33
Number of Sites Sampled by DEQ**	6
Number of Sites Sampled by IDWR	1
Number of Sites Sampled by USGS	26
Number of Sites Sampled by ISDA***	0
2020 Trend	Increasing Trend
2020 Total Score	23.98
Final Rounded 2020 Score	24
Priority Category	High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Mountain Home AFB		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	3,238
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	7
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	11
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	5	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.94	2	1.88	
Percent of wells with NO ₃ ≥ 5 mg/l	0.76	5	3.8	
Percent of wells with NO ₃ ≥ 10 mg/l	0.33	10	3.3	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	8.98	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0	x	10.0	Increasing Trend
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	10	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	23.98	
		Final Ranking Score*	24	

*Total score rounded to nearest whole number.

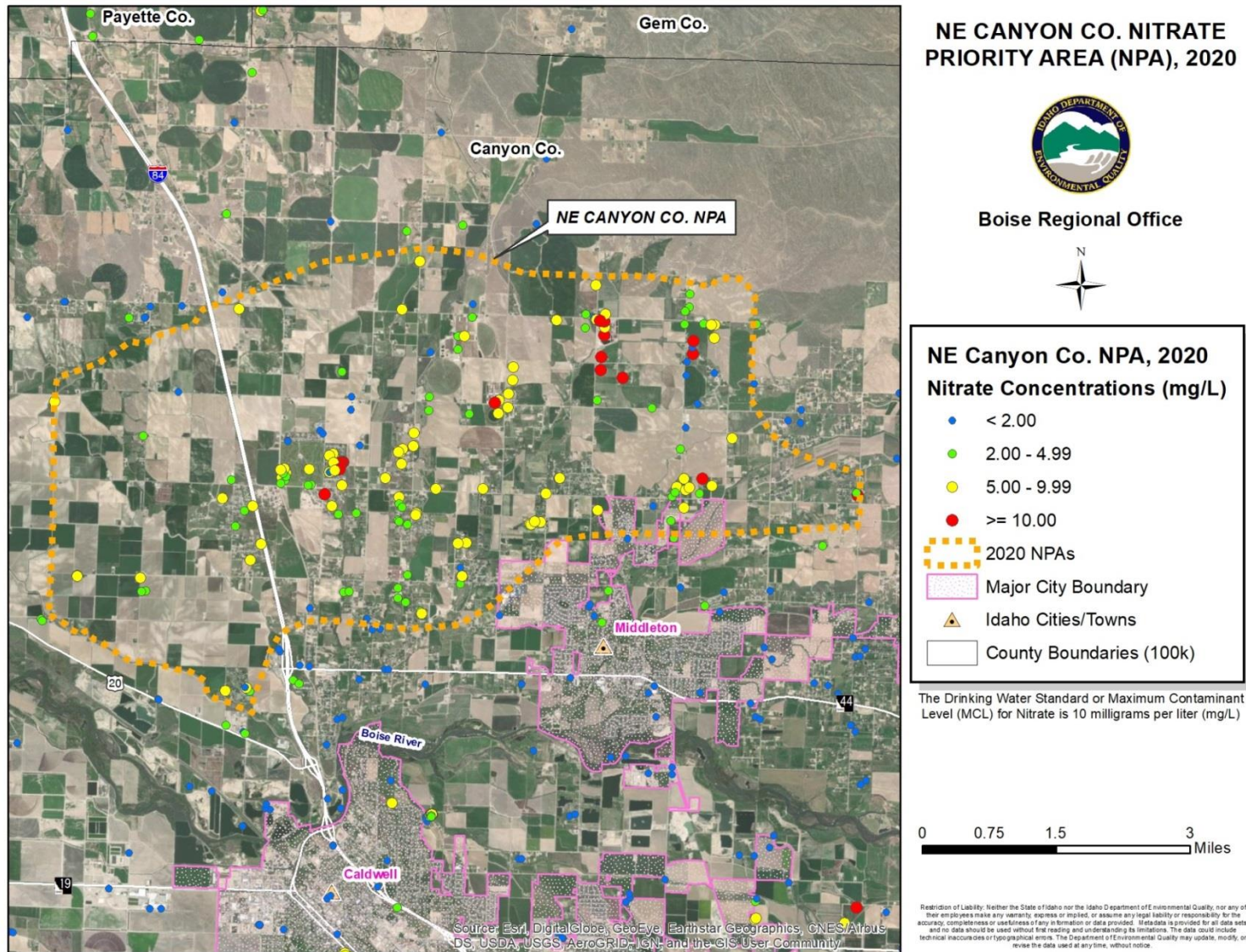


Figure B-14. NE Canyon County NPA 2020 nitrate concentrations.

Table B-11. 2020 NE Canyon County (Purple Sage) NPA summary and scoring sheet.

2020 NE Canyon Co. (Purple Sage) NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	18,653
Size of NPA (square miles)	29
Population within the NPA*	4,847
Number of Sites Sampled	176
Maximum Nitrate Value (mg/L)	27
Average Nitrate Value (mg/L)	5.9
Median (middle) Nitrate Value (mg/L)	5.4
Number of Public Water System sources within NPA	32
Number of source water assessment delineations intersecting the NPA	27
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	149
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	85
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	94
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	53
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	17
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	10
Number of Sites Sampled by DEQ**	129
Number of Sites Sampled by IDWR	7
Number of Sites Sampled by USGS	8
Number of Sites Sampled by ISDA***	32
2020 Trend	Increasing Trend
2020 Total Score	21.35
Final Rounded 2020 Score	21
Priority Category	High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: NE. Canyon Co. (formerly Purple Sage)		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	4,847
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2	x	2	32
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	2	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	17
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	6	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.85	2	1.7	
Percent of wells with NO ₃ ≥ 5 mg/l	0.53	5	2.65	
Percent of wells with NO ₃ ≥ 10 mg/l	0.10	10	1.0	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	5.35	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0	x	10.0	Increasing Trend
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	10	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	21.35	
		Final Ranking Score*	21	

*Total score rounded to nearest whole number.

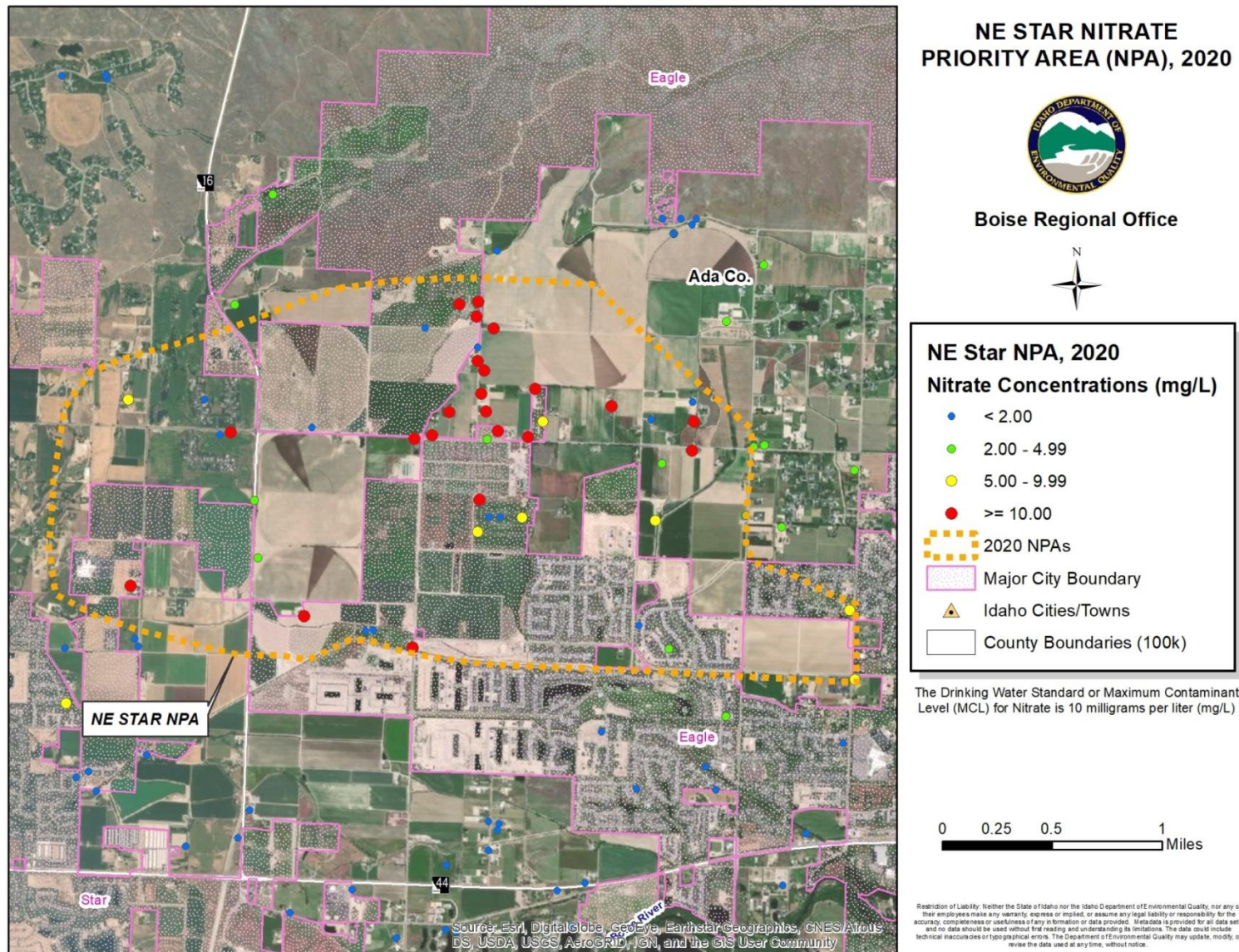


Figure B-15. NE Star NPA 2020 nitrate concentrations.

Table B-12. 2020 NE Star NPA summary and scoring sheet.

2020 NE Star NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	3,180
Size of NPA (square miles)	5
Population within the NPA*	357
Number of Sites Sampled	47
Maximum Nitrate Value (mg/L)	44
Average Nitrate Value (mg/L)	12.2
Median (middle) Nitrate Value (mg/L)	7.7
Number of Public Water System sources within NPA	2
Number of source water assessment delineations intersecting the NPA	5
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	35
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	74
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	29
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	62
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	22
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	47
Number of Sites Sampled by DEQ**	16
Number of Sites Sampled by IDWR	4
Number of Sites Sampled by USGS	3
Number of Sites Sampled by ISDA***	24
2020 Trend	Increasing Trend
2020 Total Score	24.28
Final Rounded 2020 Score	24
Priority Category	High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: NE Star		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	357
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	5
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3	x	3	22
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	3	
(Max. Possible Score for Section 1 = 10)		Population Score Total	5	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.74	2	1.48	
Percent of wells with NO ₃ ≥ 5 mg/l	0.62	5	3.1	
Percent of wells with NO ₃ ≥ 10 mg/l	0.47	10	4.7	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	9.28	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0	x	10.0	Increasing Trend
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	10.0	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	24.28	
		Final Ranking Score*	24	

*Total score rounded to nearest whole number.

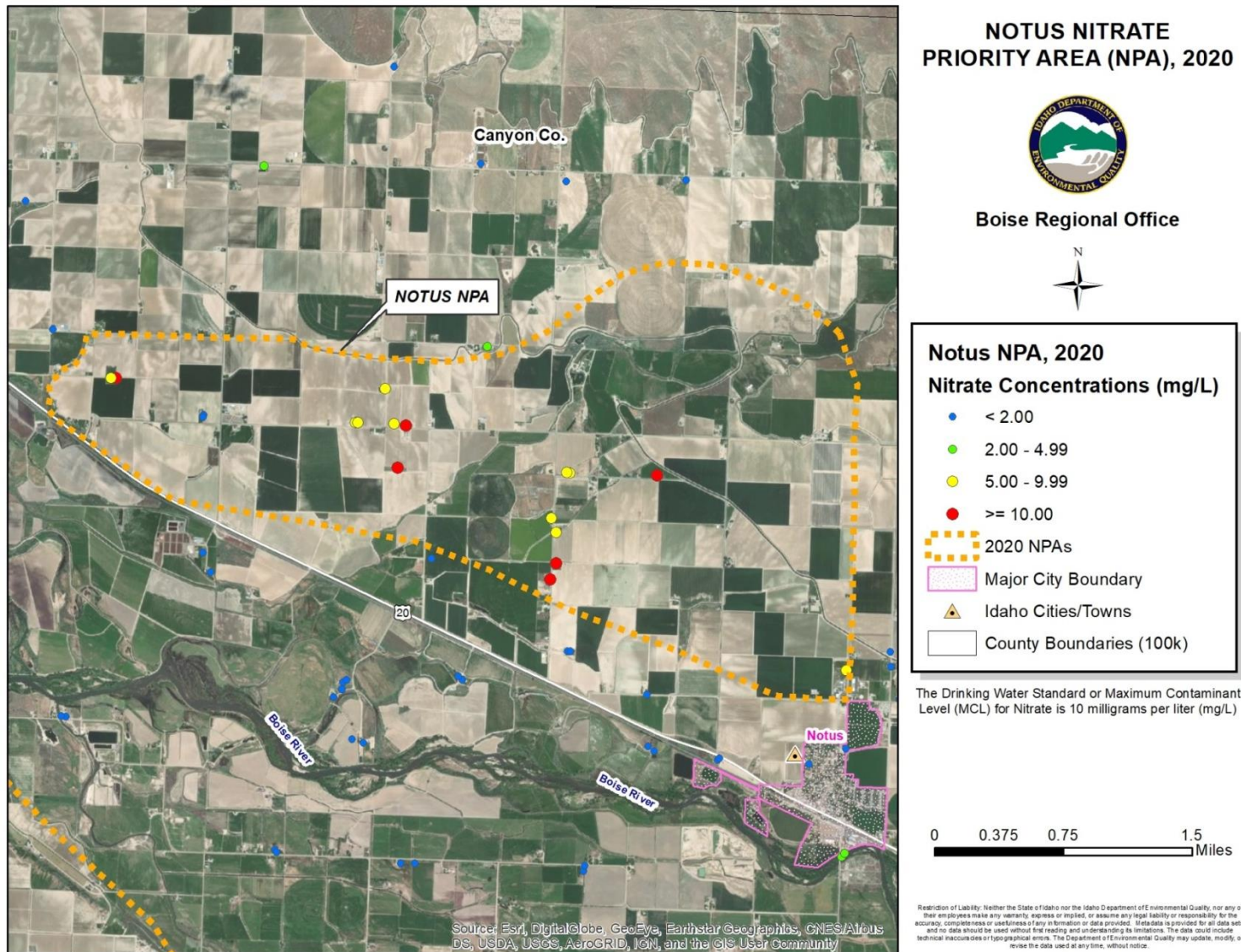


Figure B-16. Notus NPA 2020 nitrate concentrations.

Table B-13. 2020 Notus NPA summary and scoring sheet.

2020 Notus NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	4,288
Size of NPA (square miles)	7
Population within the NPA*	211
Number of Sites Sampled	20
Maximum Nitrate Value (mg/L)	16
Average Nitrate Value (mg/L)	7.6
Median (middle) Nitrate Value (mg/L)	7.3
Number of Public Water System sources within NPA	1
Number of source water assessment delineations intersecting the NPA	1
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	17
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	85
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	16
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	80
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	6
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	30
Number of Sites Sampled by DEQ**	13
Number of Sites Sampled by IDWR	2
Number of Sites Sampled by USGS	5
Number of Sites Sampled by ISDA***	0
2020 Trend	Ins. Data/No Trend
2020 Total Score	17.7
Final Rounded 2020 Score	18
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Notus		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	211
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	1
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	6
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.85	2	1.7	
Percent of wells with NO ₃ ≥ 5 mg/l	0.80	5	4.0	
Percent of wells with NO ₃ ≥ 10 mg/l	0.30	10	3	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	8.7	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5.0	Ins. Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	17.7	
		Final Ranking Score*	18	

*Total score rounded to nearest whole number.

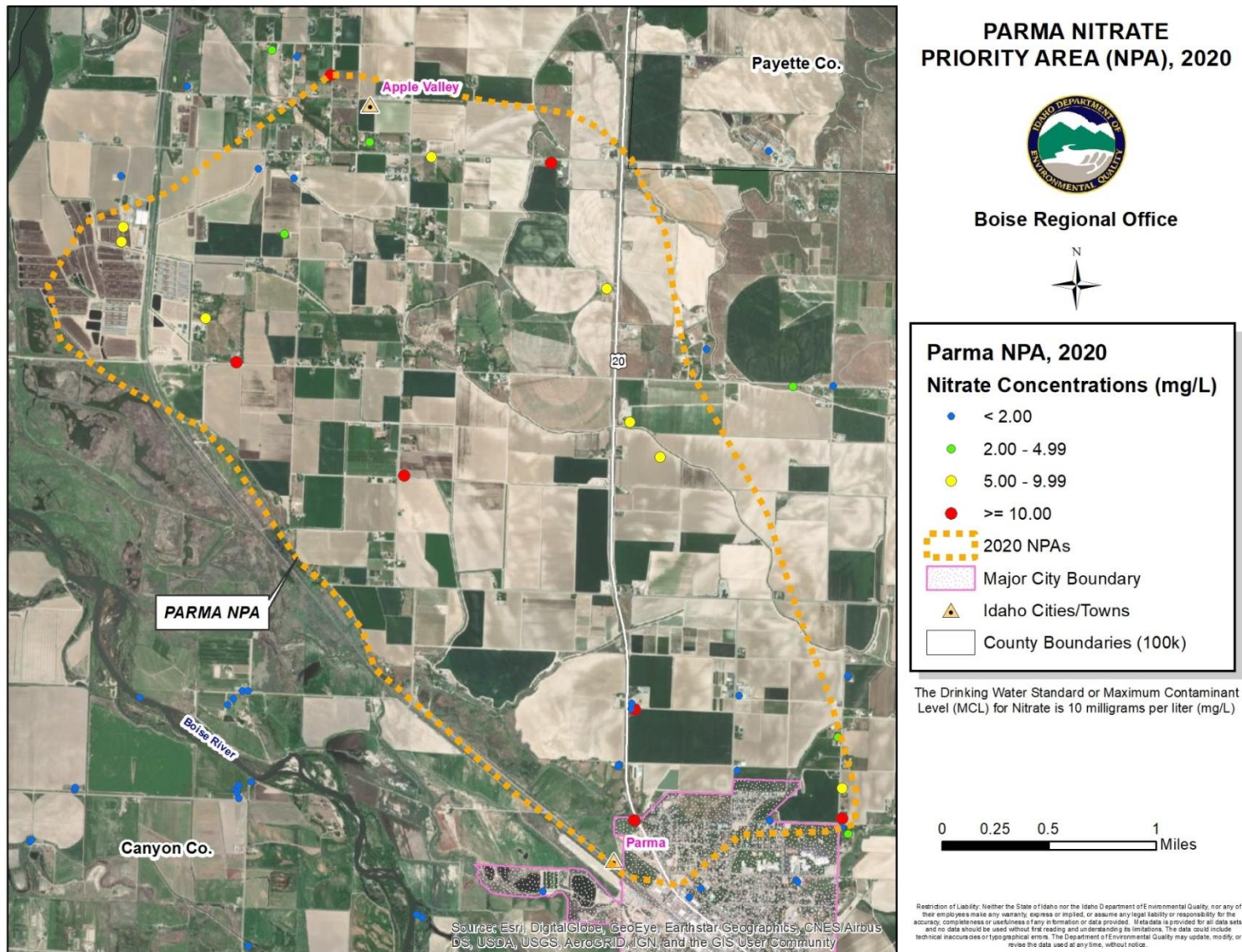


Figure B-17. Parma NPA 2020 nitrate concentrations.

Table B-14. 2020 Parma NPA summary and scoring sheet.

2020 Parma NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	4,980
Size of NPA (square miles)	8
Population within the NPA*	998
Number of Sites Sampled	30
Maximum Nitrate Value (mg/L)	16
Average Nitrate Value (mg/L)	5.7
Median (middle) Nitrate Value (mg/L)	5.2
Number of Public Water System sources within NPA	5
Number of source water assessment delineations intersecting the NPA	6
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	19
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	63
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	16
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	53
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	8
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	27
Number of Sites Sampled by DEQ**	19
Number of Sites Sampled by IDWR	4
Number of Sites Sampled by USGS	6
Number of Sites Sampled by ISDA***	1
2020 Trend	Ins. Data/No Trend
2020 Total Score	15.61
Final Rounded 2020 Score	16
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Parma		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	998
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	6
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	8
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.63	2	1.26	
Percent of wells with NO ₃ ≥ 5 mg/l	0.53	5	2.65	
Percent of wells with NO ₃ ≥ 10 mg/l	0.27	10	2.7	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	6.61	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5.0	Ins. Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	15.61	
		Final Ranking Score*	16	

*Total score rounded to nearest whole number.

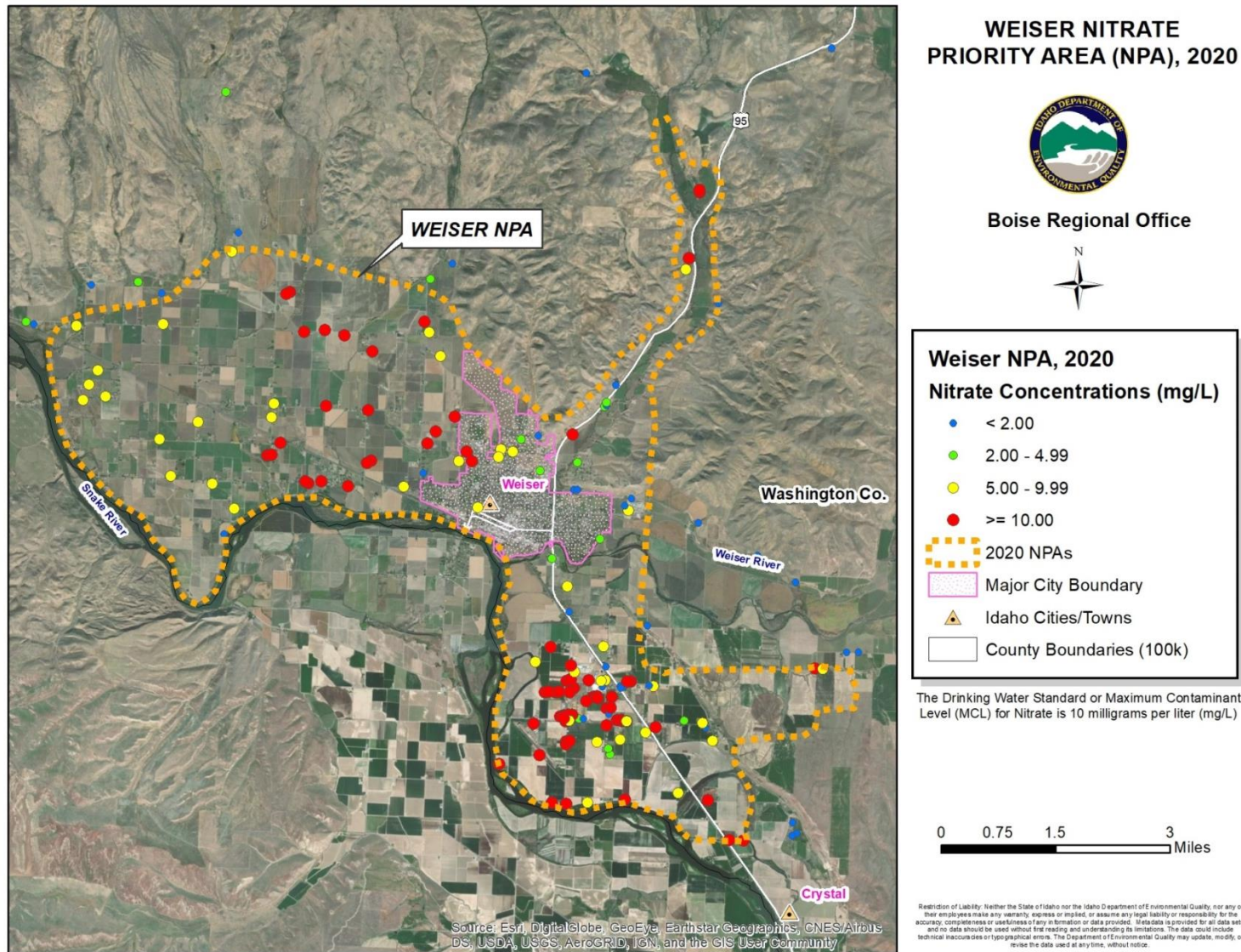


Figure B-18. Weiser NPA 2020 nitrate concentrations.

Table B-15. 2020 Weiser NPA summary and scoring sheet.

2020 Weiser NPA Summary	
DEQ Region	BRO
Size of NPA (acres)	21,462
Size of NPA (square miles)	34
Population within the NPA*	7,393
Number of Sites Sampled	150
Maximum Nitrate Value (mg/L)	60
Average Nitrate Value (mg/L)	12.0
Median (middle) Nitrate Value (mg/L)	10.1
Number of Public Water System sources within NPA	26
Number of source water assessment delineations intersecting the NPA	24
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	130
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	87
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	118
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	79
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	75
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	50
Number of Sites Sampled by DEQ**	65
Number of Sites Sampled by IDWR	11
Number of Sites Sampled by USGS	7
Number of Sites Sampled by ISDA***	67
2020 Trend	<i>Decreasing Tendency</i>
2020 Total Score	21.19
Final Rounded 2020 Score	21
Priority Category	High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Weiser		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	7,393
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2	x	2	26
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	2	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3			
>40	4	x	4	75
(Max. Possible Score for Section 1c = 4)		Subtotal	4	
(Max. Possible Score for Section 1 = 10)		Population Score Total	8	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.87	2	1.74	
Percent of wells with NO ₃ ≥ 5 mg/l	0.79	5	3.95	
Percent of wells with NO ₃ ≥ 10 mg/l	0.50	10	5.0	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	10.69	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5	x	2.5	Decreasing Tendency
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	2.5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	21.19	
		Final Ranking Score*	21	

*Total score rounded to nearest whole number.

Appendix C. Twin Falls Region 2020 Nitrate Priority Area

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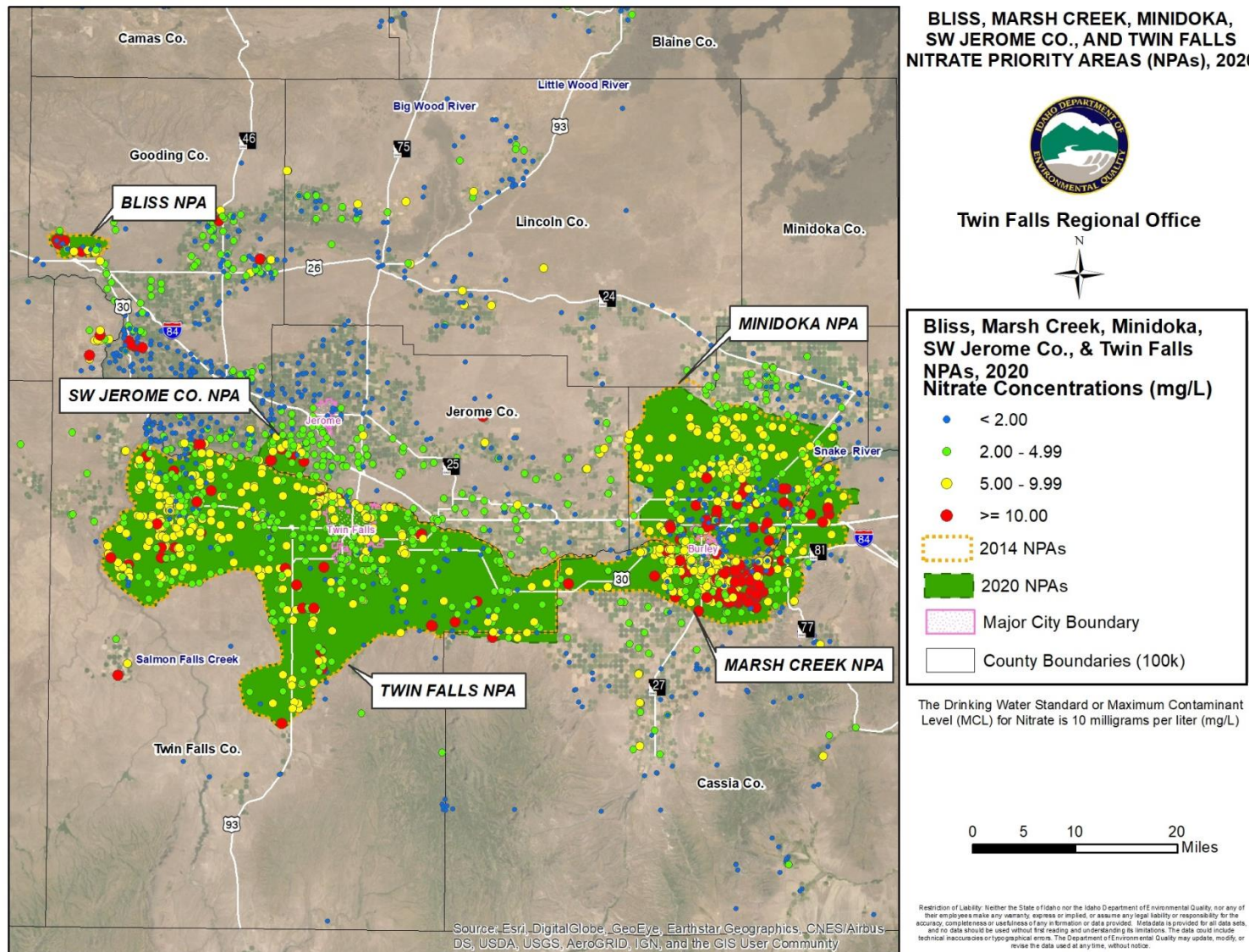


Figure C-1. Bliss, Marsh Creek, Minidoka, SW Jerome County, and Twin Falls NPA boundaries.

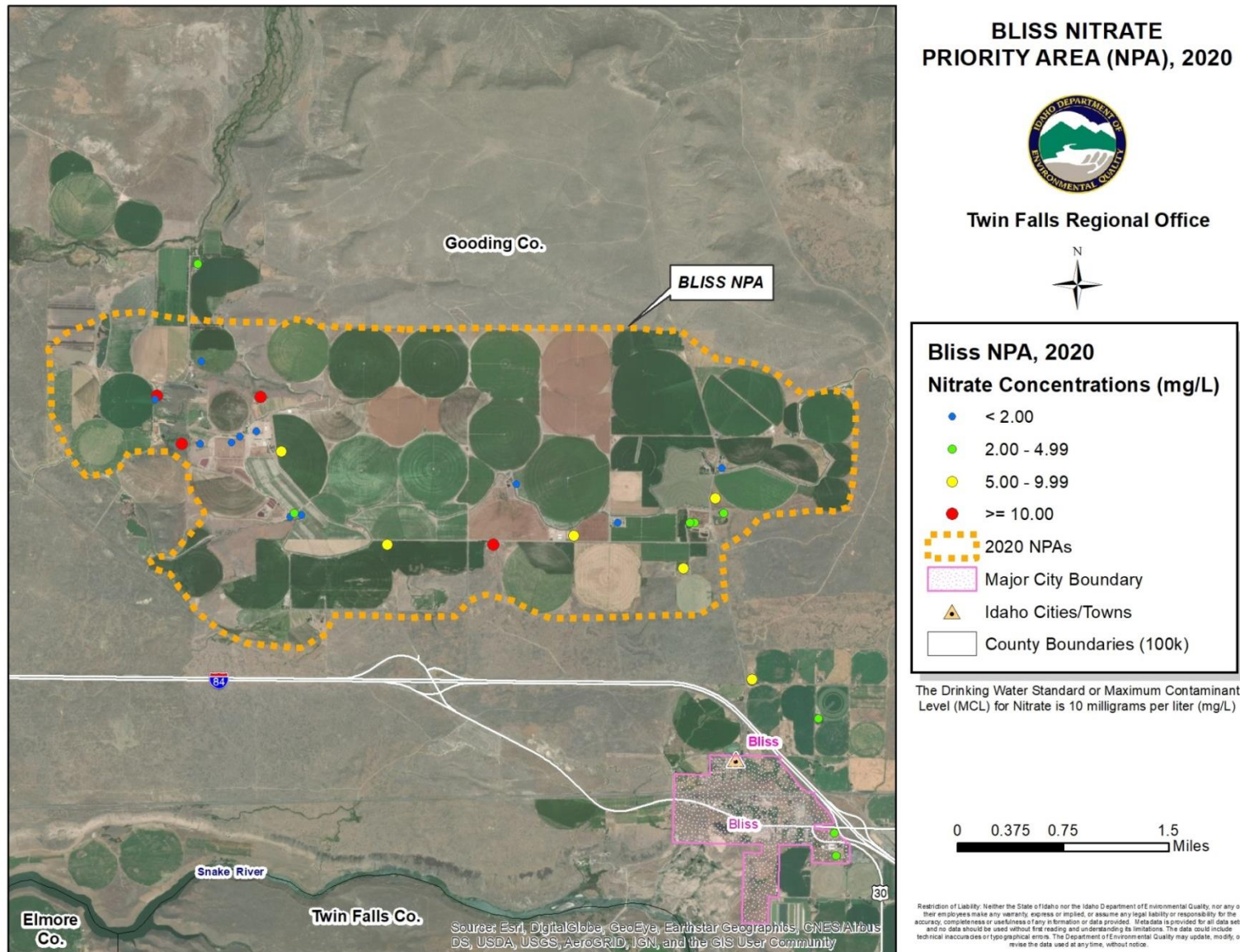


Figure C-2. Bliss NPA 2020 nitrate concentrations.

Table C-1. 2020 Bliss NPA summary and scoring sheet.

2020 Bliss NPA Summary	
DEQ Region	TFRO
Size of NPA (acres)	6,218
Size of NPA (square miles)	10
Population within the NPA*	66
Number of Sites Sampled	24
Maximum Nitrate Value (mg/L)	19
Average Nitrate Value (mg/L)	4.6
Median (middle) Nitrate Value (mg/L)	2.9
Number of Public Water System sources within NPA	0
Number of source water assessment delineations intersecting the NPA	0
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	14
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	58
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	9
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	38
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	4
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	17
Number of Sites Sampled by DEQ**	0
Number of Sites Sampled by IDWR	0
Number of Sites Sampled by USGS	0
Number of Sites Sampled by ISDA***	24
2020 Trend	Ins. Data/No Trend
2020 Total Score	11.76
Final Rounded 2020 Score	12
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Bliss		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	66
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0	x	0	
1 to 20	1			
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	0	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	4
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	2	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.58	2	1.16	
Percent of wells with NO ₃ ≥ 5 mg/l	0.38	5	1.9	
Percent of wells with NO ₃ ≥ 10 mg/l	0.17	10	1.7	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	4.76	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Insufficient Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	11.76	
		Final Ranking Score*	12	

*Total score rounded to nearest whole number.

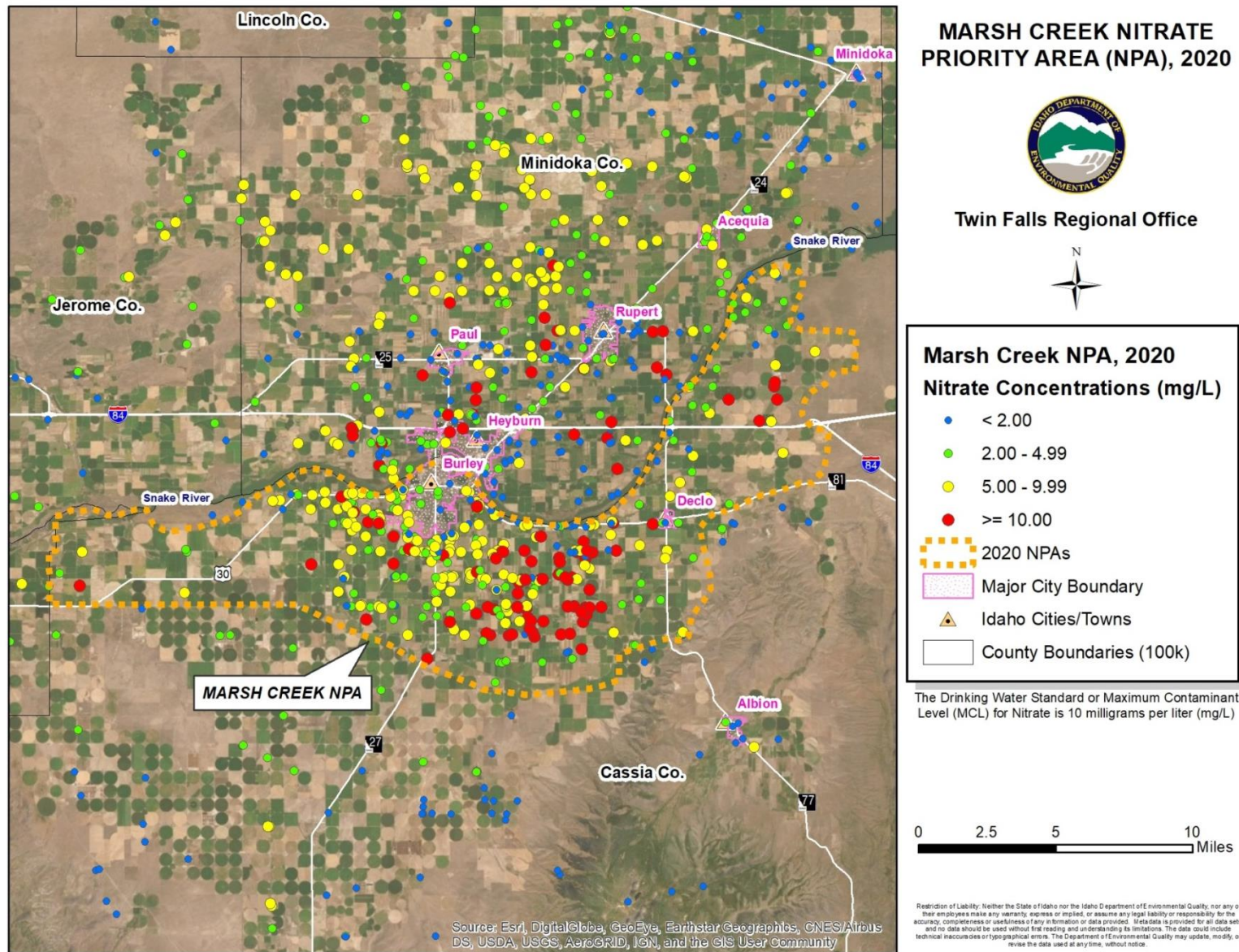


Figure C-3. Marsh Creek NPA 2020 nitrate concentrations.

Table C-2. 2020 Marsh Creek NPA summary and scoring sheet.

2020 Marsh Creek NPA Summary	
DEQ Region	TFRO
Size of NPA (acres)	101,345
Size of NPA (square miles)	158
Population within the NPA*	18,084
Number of Sites Sampled	403
Maximum Nitrate Value (mg/L)	40
Average Nitrate Value (mg/L)	6.8
Median (middle) Nitrate Value (mg/L)	5.8
Number of Public Water System sources within NPA	55
Number of source water assessment delineations intersecting the NPA	46
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	354
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	88
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	242
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	60
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	81
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	20
Number of Sites Sampled by DEQ**	110
Number of Sites Sampled by IDWR	118
Number of Sites Sampled by USGS	16
Number of Sites Sampled by ISDA***	159
2020 Trend	No Trend
2020 Total Score	21.76
Final Rounded 2020 Score	22
Priority Category	High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Marsh Creek		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2			
>10,001	3	x	3	18,084
(Max. Possible Score for Section 1a = 3)		Subtotal	3	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2			
>40	3	x	3	55
(Max. Possible Score for Section 1b = 3)		Subtotal	3	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3			
>40	4	x	4	81
(Max. Possible Score for Section 1c = 4)		Subtotal	4	
(Max. Possible Score for Section 1 = 10)		Population Score Total	10	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.88	2	1.76	
Percent of wells with NO ₃ ≥ 5 mg/l	0.60	5	3	
Percent of wells with NO ₃ ≥ 10 mg/l	0.20	10	2	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	6.76	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	No Trend
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	21.76	
		Final Ranking Score*	22	

*Total score rounded to nearest whole number.

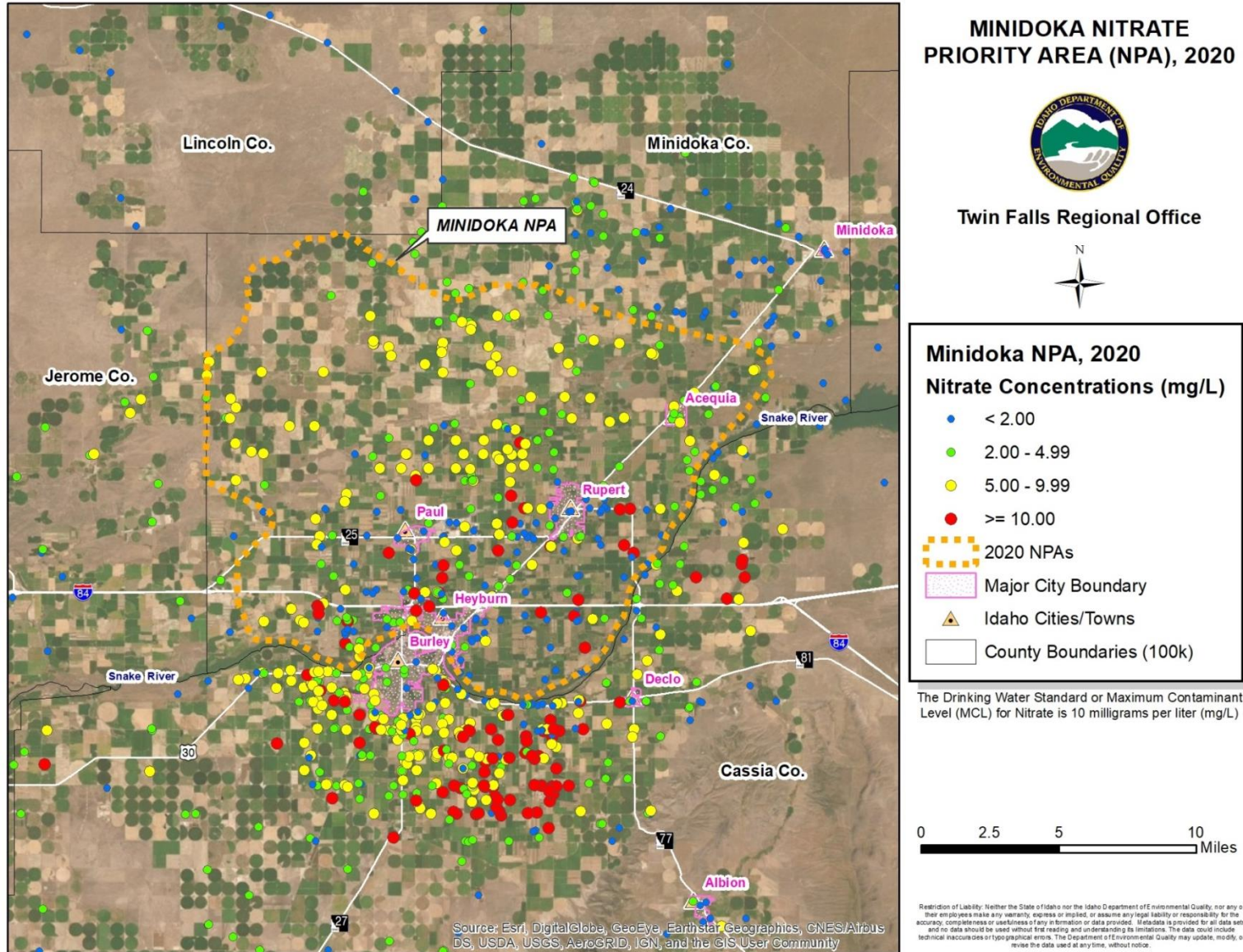


Figure C-4. Minidoka NPA 2020 nitrate concentrations.

Table C-3. 2020 Minidoka NPA summary and scoring sheet.

2020 Minidoka NPA Summary	
DEQ Region	TFRO
Size of NPA (acres)	145,083
Size of NPA (square miles)	227
Population within the NPA*	18,605
Number of Sites Sampled	347
Maximum Nitrate Value (mg/L)	83
Average Nitrate Value (mg/L)	5.1
Median (middle) Nitrate Value (mg/L)	4.3
Number of Public Water System sources within NPA	48
Number of source water assessment delineations intersecting the NPA	75
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	227
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	65
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	142
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	41
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	27
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	8
Number of Sites Sampled by DEQ**	123
Number of Sites Sampled by IDWR	55
Number of Sites Sampled by USGS	55
Number of Sites Sampled by ISDA***	114
2020 Trend	Increasing Trend
2020 Total Score	23.15
Final Rounded 2020 Score	23
Priority Category	High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Minidoka		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2			
>10,001	3	x	3	18,605
(Max. Possible Score for Section 1a = 3)		Subtotal	3	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2			
>40	3	x	3	75
(Max. Possible Score for Section 1b = 3)		Subtotal	3	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3	x	3	27
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	3	
(Max. Possible Score for Section 1 = 10)		Population Score Total	9	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.65	2	1.3	
Percent of wells with NO ₃ ≥ 5 mg/l	0.41	5	2.05	
Percent of wells with NO ₃ ≥ 10 mg/l	0.08	10	0.8	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	4.15	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0	x	10.0	Increasing Trend
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	10	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	23.15	
		Final Ranking Score*	23	

*Total score rounded to nearest whole number.

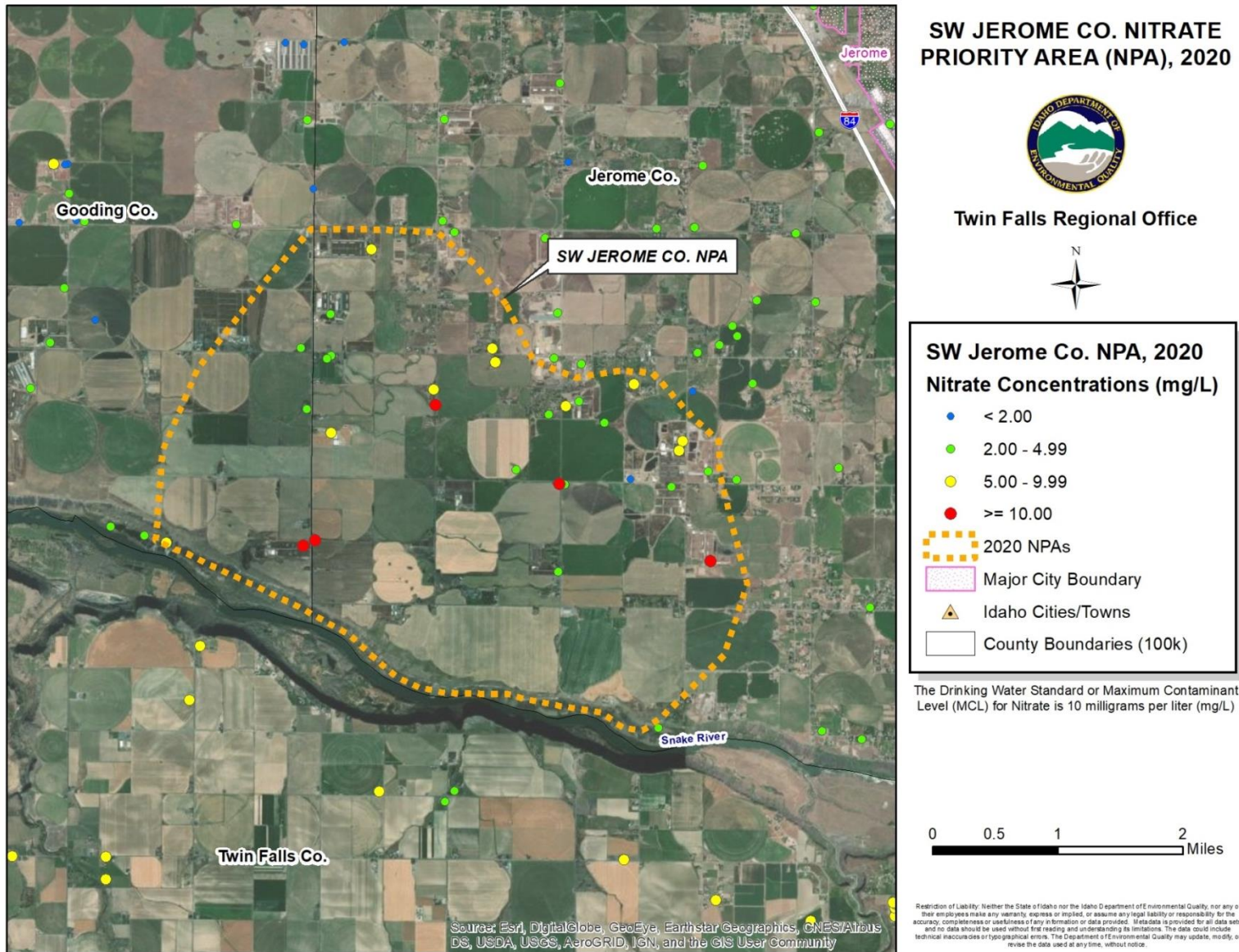


Figure C-5. SW Jerome County 2020 nitrate concentrations.

Table C-4. 2020 SW Jerome County NPA summary and scoring sheet.

2020 SW Jerome Co. NPA Summary	
DEQ Region	TFRO
Size of NPA (acres)	7,901
Size of NPA (square miles)	12
Population within the NPA*	615
Number of Sites Sampled	30
Maximum Nitrate Value (mg/L)	30
Average Nitrate Value (mg/L)	7.4
Median (middle) Nitrate Value (mg/L)	5.0
Number of Public Water System sources within NPA	0
Number of source water assessment delineations intersecting the NPA	0
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	29
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	97
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	15
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	50
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	5
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	17
Number of Sites Sampled by DEQ**	11
Number of Sites Sampled by IDWR	1
Number of Sites Sampled by USGS	3
Number of Sites Sampled by ISDA***	15
2020 Trend	Increasing
2020 Total Score	19.14
Final Rounded 2020 Score	19
Priority Category	Moderate-High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: SW Jerome Co.		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	615
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0	x	0	0
1 to 20	1			
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	0	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	5
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	2	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.97	2	1.94	
Percent of wells with NO ₃ ≥ 5 mg/l	0.50	5	2.5	
Percent of wells with NO ₃ ≥ 10 mg/l	0.17	10	1.7	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	6.14	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0	x	10	Increasing
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	10	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	Aquaculture
(Max. Possible Score for Section 4 = 1)		Beneficial use score	1	
(Max. Possible Total Score = 38)		Total Score	19.14	
		Final Ranking Score*	19	

*Total score rounded to nearest whole number.

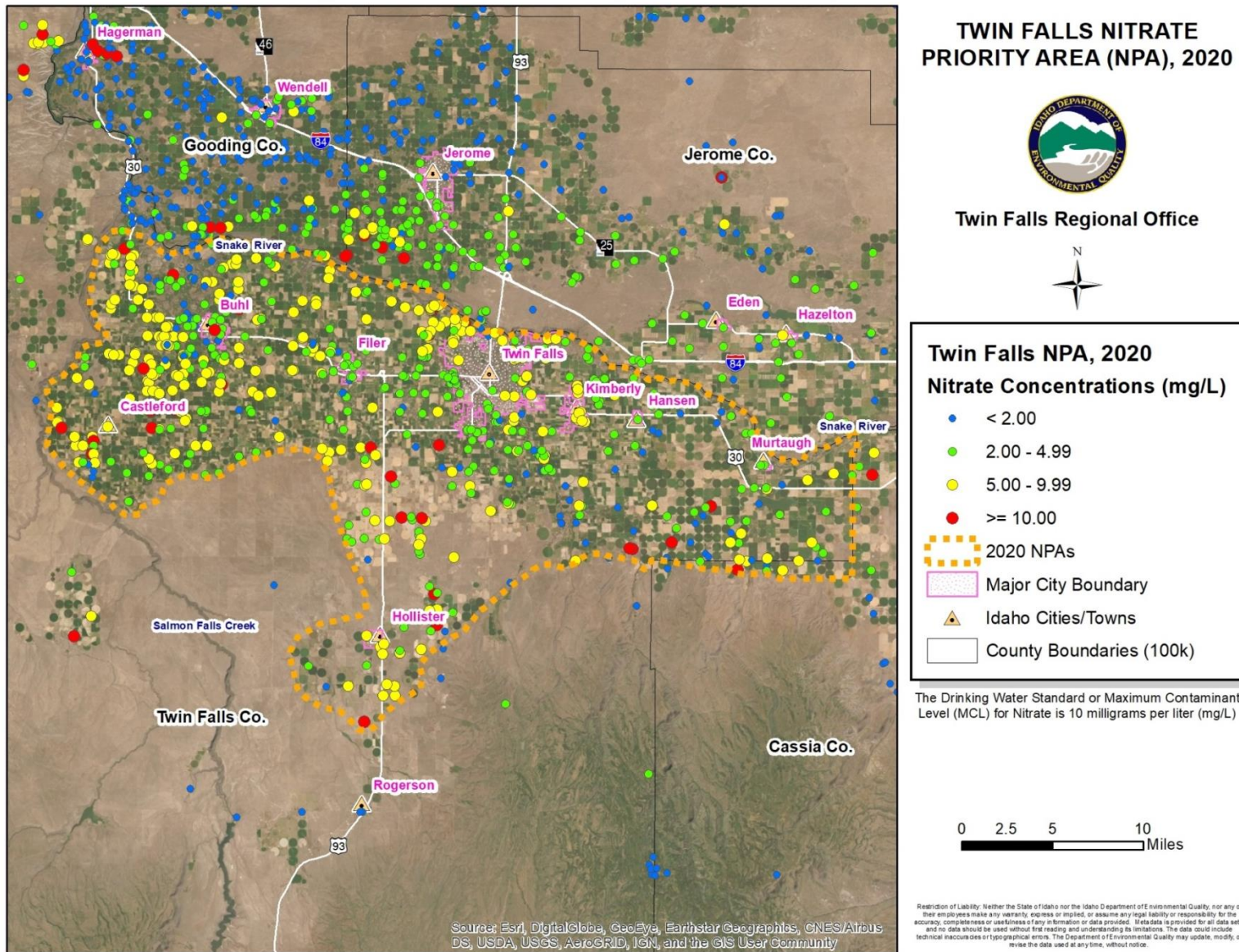


Figure C-6. Twin Falls NPA 2020 nitrate concentrations.

Table C-5. 2020 Twin Falls County NPA summary and scoring sheet.

2020 Twin Falls Co NPA Summary	
DEQ Region	TFRO
Size of NPA (acres)	363,687
Size of NPA (square miles)	568
Population within the NPA*	76,293
Number of Sites Sampled	719
Maximum Nitrate Value (mg/L)	41
Average Nitrate Value (mg/L)	4.9
Median (middle) Nitrate Value (mg/L)	4.7
Number of Public Water System sources within NPA	111
Number of source water assessment delineations intersecting the NPA	91
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	621
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	86
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	315
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	44
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	30
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	4
Number of Sites Sampled by DEQ**	325
Number of Sites Sampled by IDWR	66
Number of Sites Sampled by USGS	97
Number of Sites Sampled by ISDA***	231
2020 Trend	No Trend
2020 Total Score	19.32
Final Rounded 2020 Score	19
Priority Category	Moderate-High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Twin Falls		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2			
>10,001	3	x	3	76,293
(Max. Possible Score for Section 1a = 3)		Subtotal	3	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2			
>40	3	x	3	111
(Max. Possible Score for Section 1b = 3)		Subtotal	3	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3	x	3	30
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	3	
(Max. Possible Score for Section 1 = 10)		Population Score Total	9	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.86	2	1.72	
Percent of wells with NO ₃ ≥ 5 mg/l	0.44	5	2.2	
Percent of wells with NO ₃ ≥ 10 mg/l	0.04	10	0.4	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	4.32	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5.0	No Trend
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	1	Aquaculture
(Max. Possible Total Score = 38)		Total Score	19.32	
		Final Ranking Score*	19	

*Total score rounded to nearest whole number.

Appendix D. Pocatello Region 2020 Nitrate Priority Area

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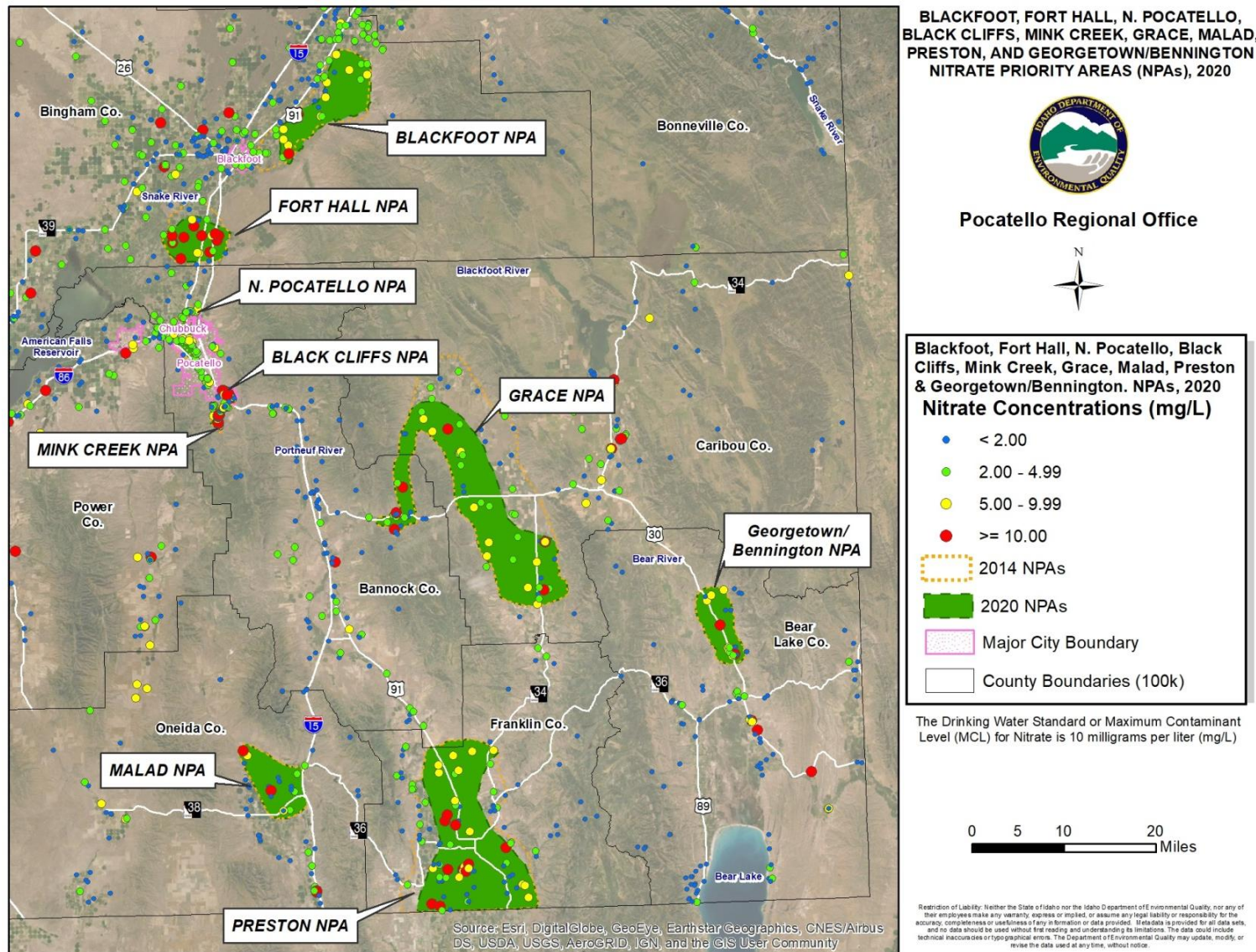


Figure D-1. Blackfoot, Fort Hall, N. Pocatello, Black Cliffs, Mink Creek, Grace, Malad, Preston, and Georgetown/Bennington NPA boundaries.

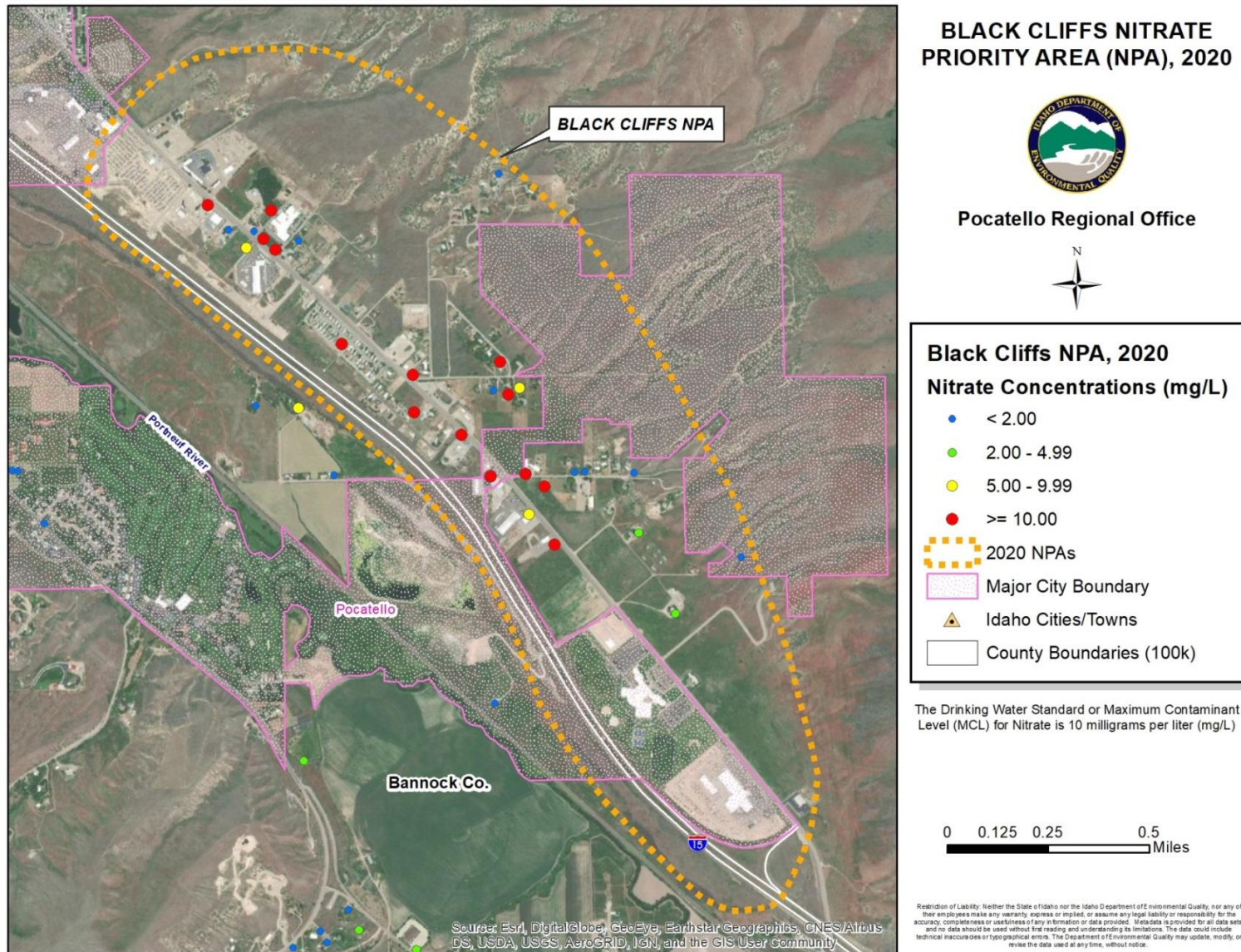


Figure D-2. Black Cliffs NPA 2020 nitrate concentrations.

Table D-1. 2020 Black Cliffs NPA summary and scoring sheet.

2020 Black Cliffs NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	1,030
Size of NPA (square miles)	2
Population within the NPA*	493
Number of Sites Sampled	28
Maximum Nitrate Value (mg/L)	28.68
Average Nitrate Value (mg/L)	10.3
Median (middle) Nitrate Value (mg/L)	9.8
Number of Public Water System sources within NPA	2
Number of source water assessment delineations intersecting the NPA	2
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	19
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	68
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	17
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	61
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	14
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	50
Number of Sites Sampled by DEQ**	28
Number of Sites Sampled by IDWR	0
Number of Sites Sampled by USGS	0
Number of Sites Sampled by ISDA***	0
2020 Trend	Ins. Data/No Trend
2020 Total Score	18.41
Final Rounded 2020 Score	18
Priority Category	Moderate-High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Black Cliffs		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	493
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	2
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	14
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.68	2	1.36	
Percent of wells with NO ₃ ≥ 5 mg/l	0.61	5	3.05	
Percent of wells with NO ₃ ≥ 10 mg/l	0.50	10	5.0	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	9.41	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Insufficient Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
Total Score 18.41				
Final Ranking Score* 18				

*Total score rounded to nearest whole number.

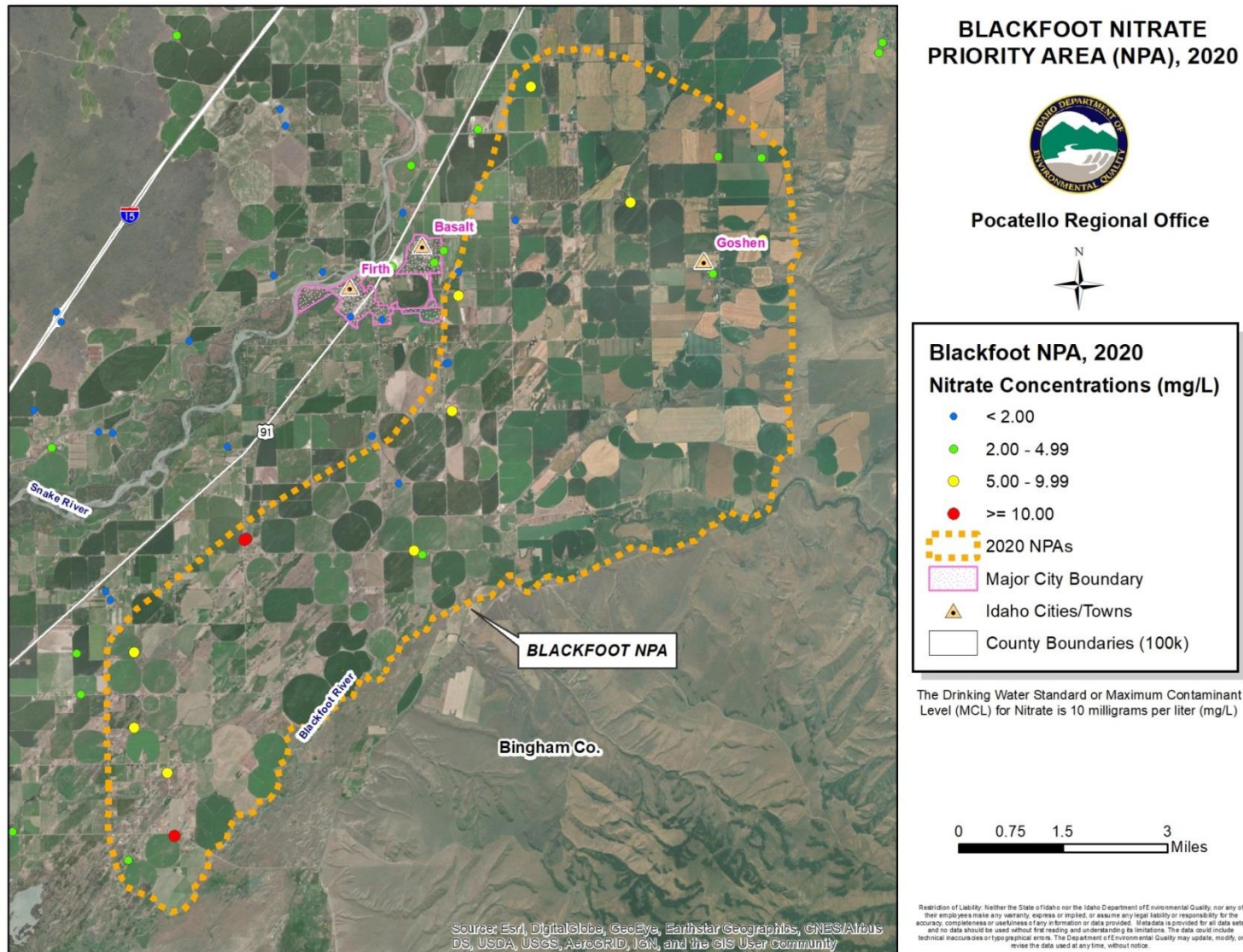


Figure D-3. Blackfoot NPA 2020 nitrate concentrations.

Table D-2. 2020 Blackfoot NPA summary and scoring sheet.

2020 Blackfoot NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	32,620
Size of NPA (square miles)	51
Population within the NPA*	1,979
Number of Sites Sampled	22
Maximum Nitrate Value (mg/L)	16
Average Nitrate Value (mg/L)	5.5
Median (middle) Nitrate Value (mg/L)	5.4
Number of Public Water System sources within NPA	3
Number of source water assessment delineations intersecting the NPA	24
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	17
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	77
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	12
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	55
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	3
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	14
Number of Sites Sampled by DEQ**	3
Number of Sites Sampled by IDWR	7
Number of Sites Sampled by USGS	1
Number of Sites Sampled by ISDA***	11
2020 Trend	<i>Decreasing Tendency</i>
2020 Total Score	13.19
Final Rounded 2020 Score	13
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Blackfoot		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	1979
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2	x	2	24
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	2	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	3
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	5	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.77	2	1.54	
Percent of wells with NO ₃ ≥ 5 mg/l	0.55	5	2.75	
Percent of wells with NO ₃ ≥ 10 mg/l	0.14	10	1.4	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	5.69	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5	x	2.5	
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	2.5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	13.19	
		Final Ranking Score*	13	

*Total score rounded to nearest whole number.

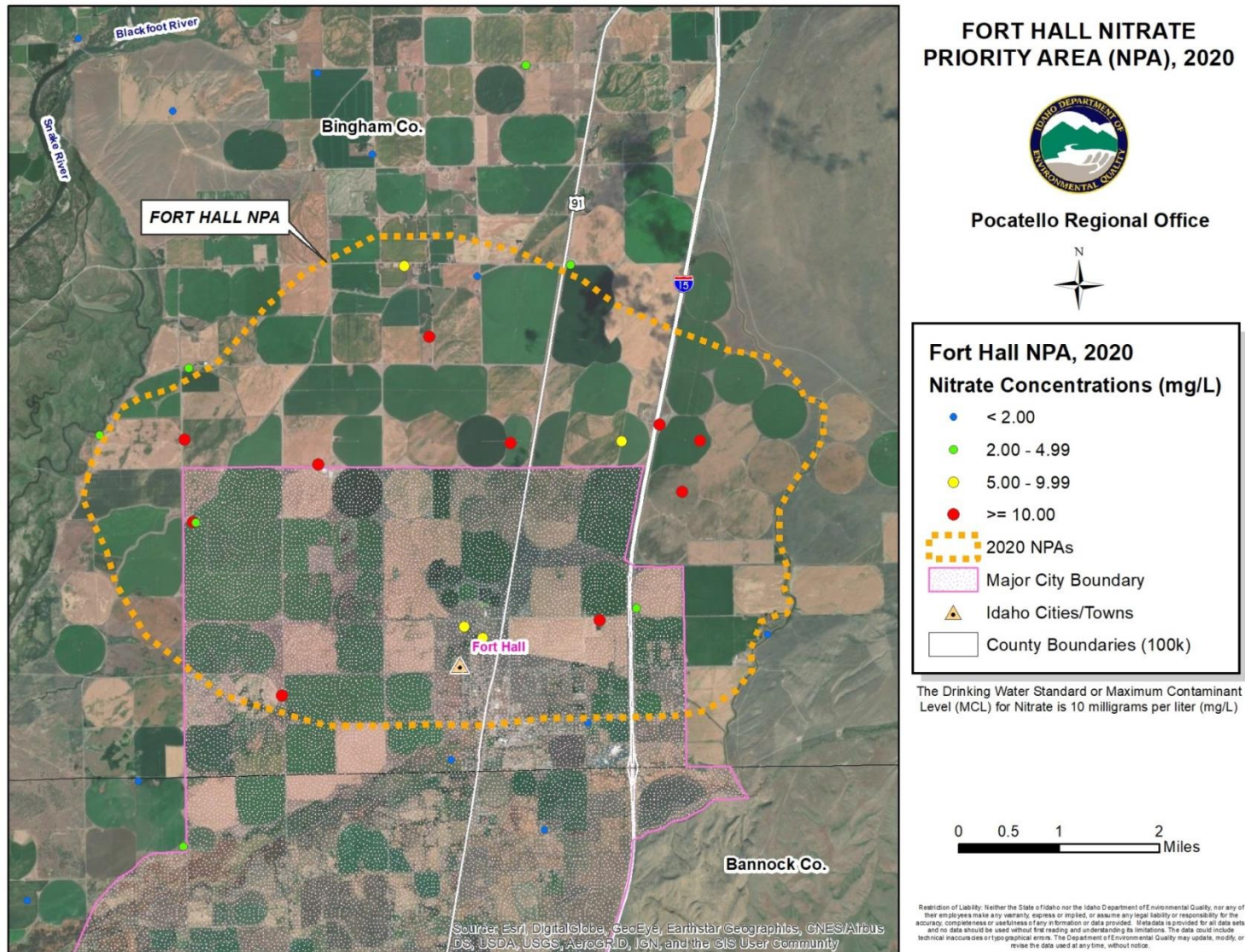


Figure D-4. Fort Hall NPA 2020 nitrate concentrations.

Table D-3. 2020 Fort Hall NPA summary and scoring sheet.

2020 Fort Hall NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	17,277
Size of NPA (square miles)	27
Population within the NPA*	1,158
Number of Sites Sampled	17
Maximum Nitrate Value (mg/L)	23.6
Average Nitrate Value (mg/L)	11.7
Median (middle) Nitrate Value (mg/L)	11.0
Number of Public Water System sources within NPA	3
Number of source water assessment delineations intersecting the NPA	5
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	16
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	94
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	14
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	82
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	10
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	59
Number of Sites Sampled by DEQ**	0
Number of Sites Sampled by IDWR	5
Number of Sites Sampled by USGS	12
Number of Sites Sampled by ISDA***	0
2020 Trend	Ins. Data/No Trend
2020 Total Score	21.88
Final Rounded 2020 Score	22
Priority Category	High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Fort Hall		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	1,158
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	5
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	10
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	5	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.94	2	1.88	
Percent of wells with NO ₃ ≥ 5 mg/l	0.82	5	4.1	
Percent of wells with NO ₃ ≥ 10 mg/l	0.59	10	5.9	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	11.88	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Insufficient Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	21.88	
		Final Ranking Score*	22	

*Total score rounded to nearest whole number.

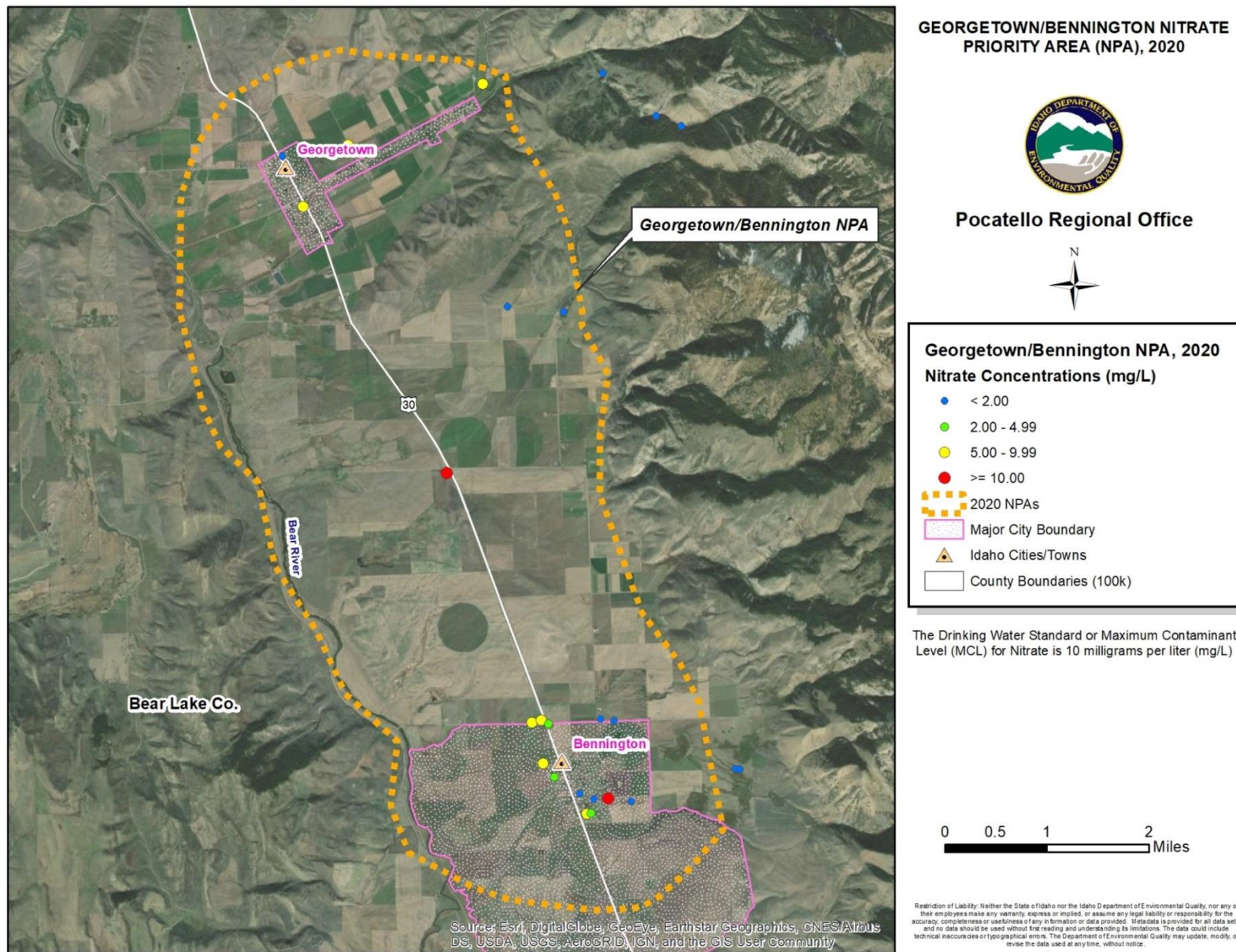


Figure D-5. Georgetown/Bennington NPA 2020 nitrate concentrations.

Table D-4. 2020 Georgetown/Bennington NPA summary and scoring sheet.

2020 Georgetown/Bennington NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	17,764
Size of NPA (square miles)	28
Population within the NPA*	795
Number of Sites Sampled	22
Maximum Nitrate Value (mg/L)	13.3
Average Nitrate Value (mg/L)	4.2
Median (middle) Nitrate Value (mg/L)	2.8
Number of Public Water System sources within NPA	2
Number of source water assessment delineations intersecting the NPA	2
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	14
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	64
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	10
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	45
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	2
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	9
Number of Sites Sampled by DEQ**	14
Number of Sites Sampled by IDWR	2
Number of Sites Sampled by USGS	2
Number of Sites Sampled by ISDA***	4
2020 Trend	Ins. Data/No Trend
2020 Total Score	12.43
Final Rounded 2020 Score	12
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Georgetown Bennington		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	795
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	2
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	2
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	3	
2) WATER QUALITY	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.64	2	1.28	
Percent of wells with NO ₃ ≥ 5 mg/l	0.45	5	2.25	
Percent of wells with NO ₃ ≥ 10 mg/l	0.09	10	0.9	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	4.43	
3) WATER QUALITY TRENDS		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Insufficient Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	12.43	
		Final Ranking Score*	12	

*Total score rounded to nearest whole number.

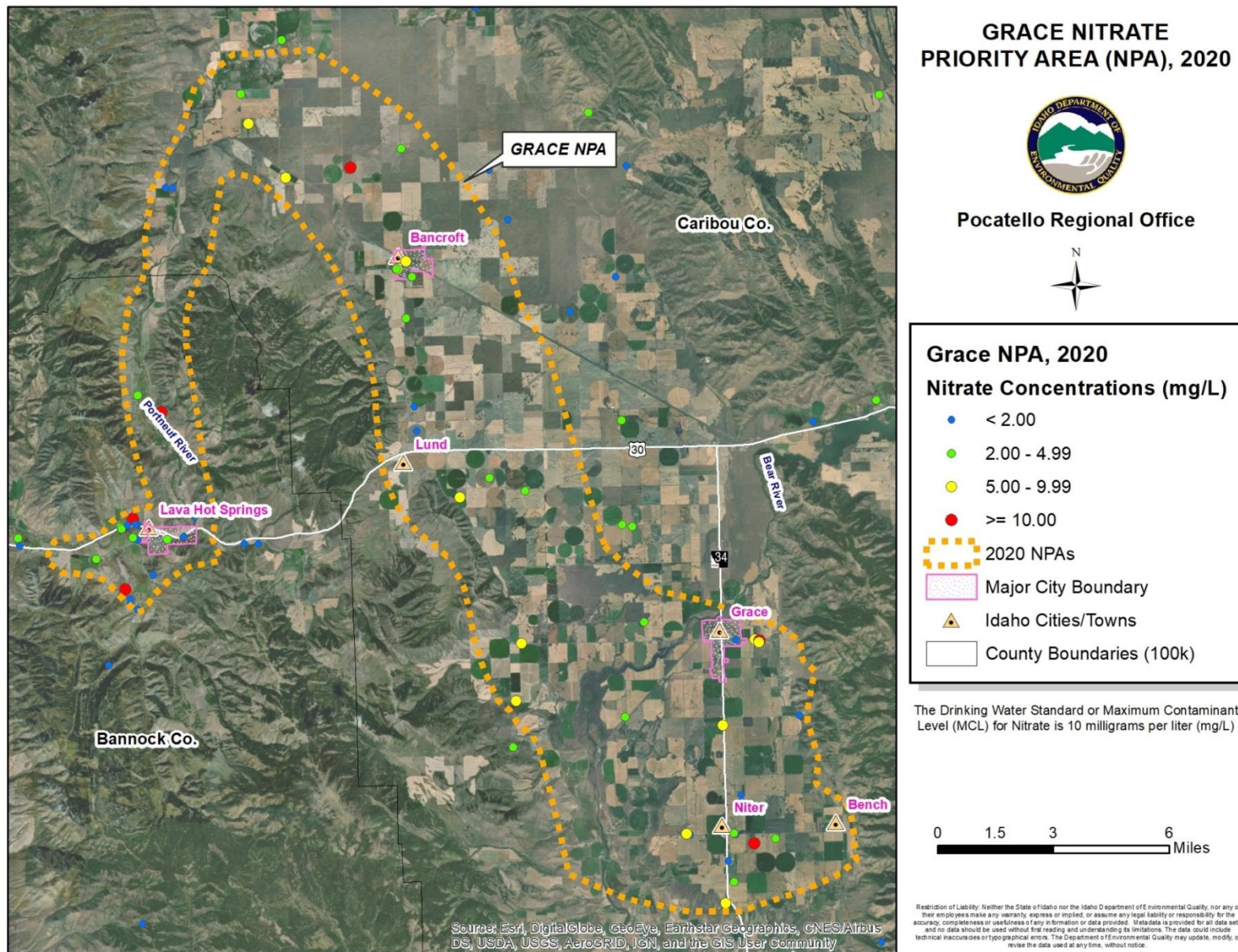


Figure D-6. Grace NPA 2020 nitrate concentrations.

Table D-5. 2020 Grace NPA summary and scoring sheet.

2020 Grace NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	95,693
Size of NPA (square miles)	150
Population within the NPA*	2,737
Number of Sites Sampled	60
Maximum Nitrate Value (mg/L)	42.57
Average Nitrate Value (mg/L)	5.1
Median (middle) Nitrate Value (mg/L)	2.8
Number of Public Water System sources within NPA	27
Number of source water assessment delineations intersecting the NPA	19
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	37
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	62
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	18
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	30
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	6
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	10
Number of Sites Sampled by DEQ**	23
Number of Sites Sampled by IDWR	9
Number of Sites Sampled by USGS	13
Number of Sites Sampled by ISDA***	15
2020 Trend	Decreasing Trend
2020 Total Score	9.74
Final Rounded 2020 Score	10
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Grace		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	2,737
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2	x	2	27
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	2	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	6
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	6	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.62	2	1.24	
Percent of wells with NO ₃ ≥ 5 mg/l	0.30	5	1.5	
Percent of wells with NO ₃ ≥ 10 mg/l	0.10	10	1.0	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	3.74	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0	x	0	Decreasing Trend
(Max Possible Score for Section 3 = 10)		Trend Score	0	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	9.74	
		Final Ranking Score*	10	

*Total score rounded to nearest whole number.

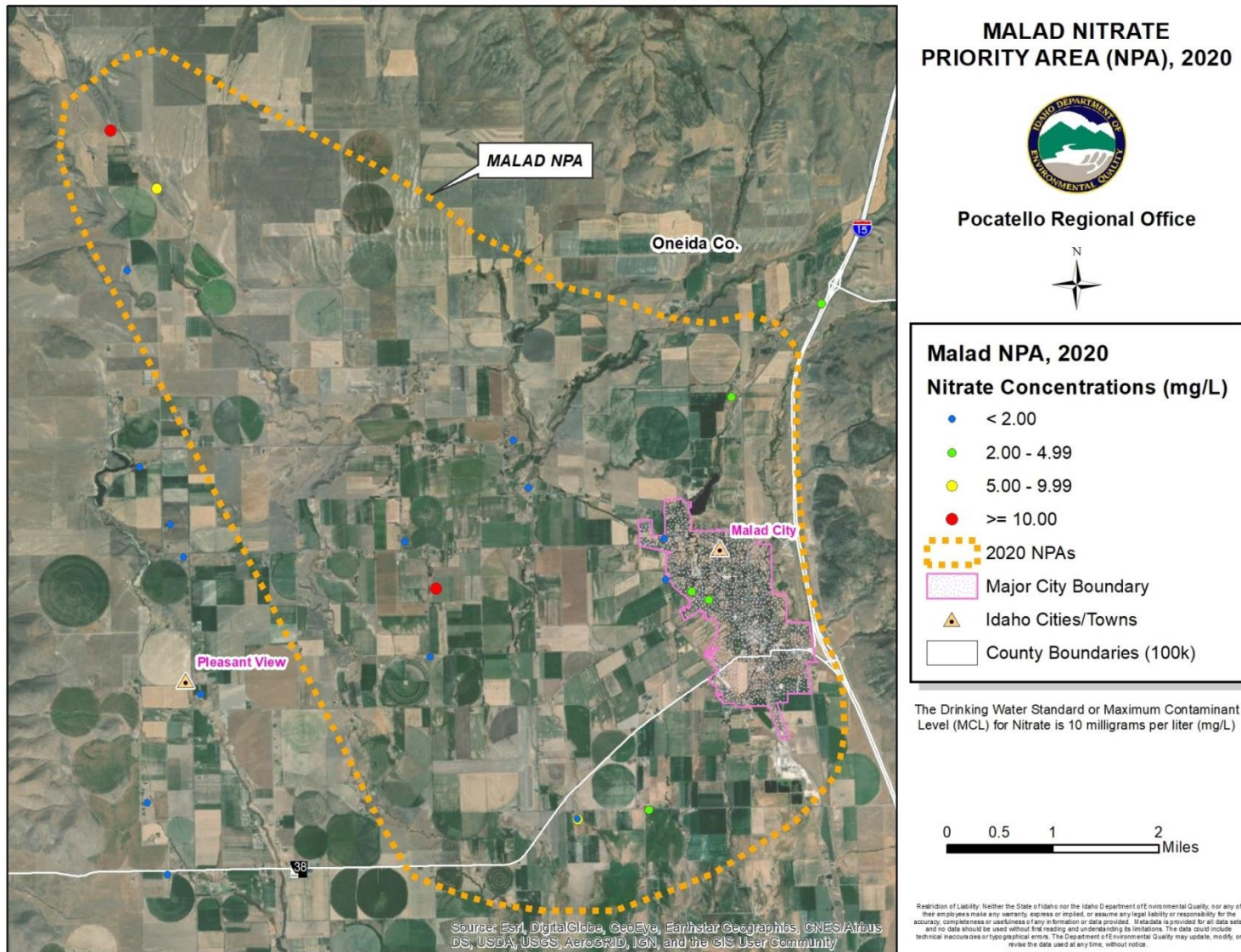


Figure D-7. Malad NPA 2020 nitrate concentrations.

Table D-6. 2020 Malad NPA summary and scoring sheet.

2020 Malad NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	22,379
Size of NPA (square miles)	35
Population within the NPA*	2,803
Number of Sites Sampled	16
Maximum Nitrate Value (mg/L)	11.51
Average Nitrate Value (mg/L)	3.3
Median (middle) Nitrate Value (mg/L)	2.6
Number of Public Water System sources within NPA	4
Number of source water assessment delineations intersecting the NPA	4
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	8
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	50
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	4
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	25
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	2
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	13
Number of Sites Sampled by DEQ**	4
Number of Sites Sampled by IDWR	3
Number of Sites Sampled by USGS	2
Number of Sites Sampled by ISDA***	7
2020 Trend	Ins. Data/No Trend
2020 Total Score	12.55
Final Rounded 2020 Score	13
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Malad		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	2,803
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	4
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	2
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.50	2	1.0	
Percent of wells with NO ₃ ≥ 5 mg/l	0.25	5	1.25	
Percent of wells with NO ₃ ≥ 10 mg/l	0.13	10	1.3	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	3.55	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Ins. Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	12.55	
		Final Ranking Score*	13	

*Total score rounded to nearest whole number.

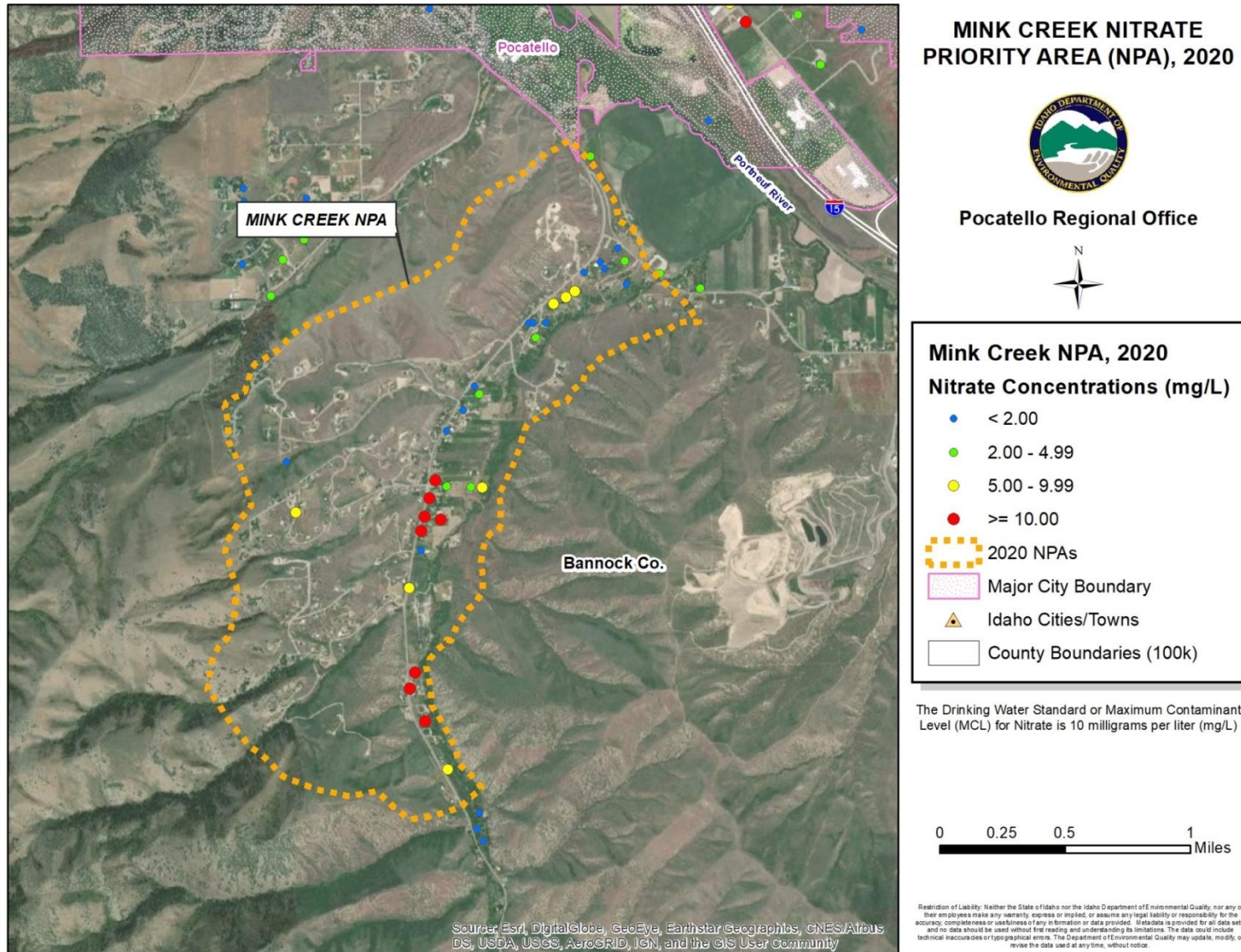


Figure D-8. Mink Creek NPA 2020 nitrate concentrations.

Table D-7. 2020 Mink Creek NPA summary and scoring sheet.

2020 Mink Creek NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	1,576
Size of NPA (square miles)	2
Population within the NPA*	643
Number of Sites Sampled	34
Maximum Nitrate Value (mg/L)	21
Average Nitrate Value (mg/L)	5.4
Median (middle) Nitrate Value (mg/L)	4.0
Number of Public Water System sources within NPA	6
Number of source water assessment delineations intersecting the NPA	30
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	23
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	68
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	15
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	44
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	8
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	24
Number of Sites Sampled by DEQ**	34
Number of Sites Sampled by IDWR	0
Number of Sites Sampled by USGS	0
Number of Sites Sampled by ISDA***	0
2020 Trend	Ins. Data/No Trend
2020 Total Score	15.96
Final Rounded 2020 Score	16
Priority Category	Moderate-High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Mink Creek		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	643
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2	x	2	30
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	2	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x		8
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	5	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.68	2	1.36	
Percent of wells with NO ₃ ≥ 5 mg/l	0.44	5	2.2	
Percent of wells with NO ₃ ≥ 10 mg/l	0.24	10	2.4	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	5.96	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	Ins. Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	15.96	
		Final Ranking Score*	16	

*Total score rounded to nearest whole number.

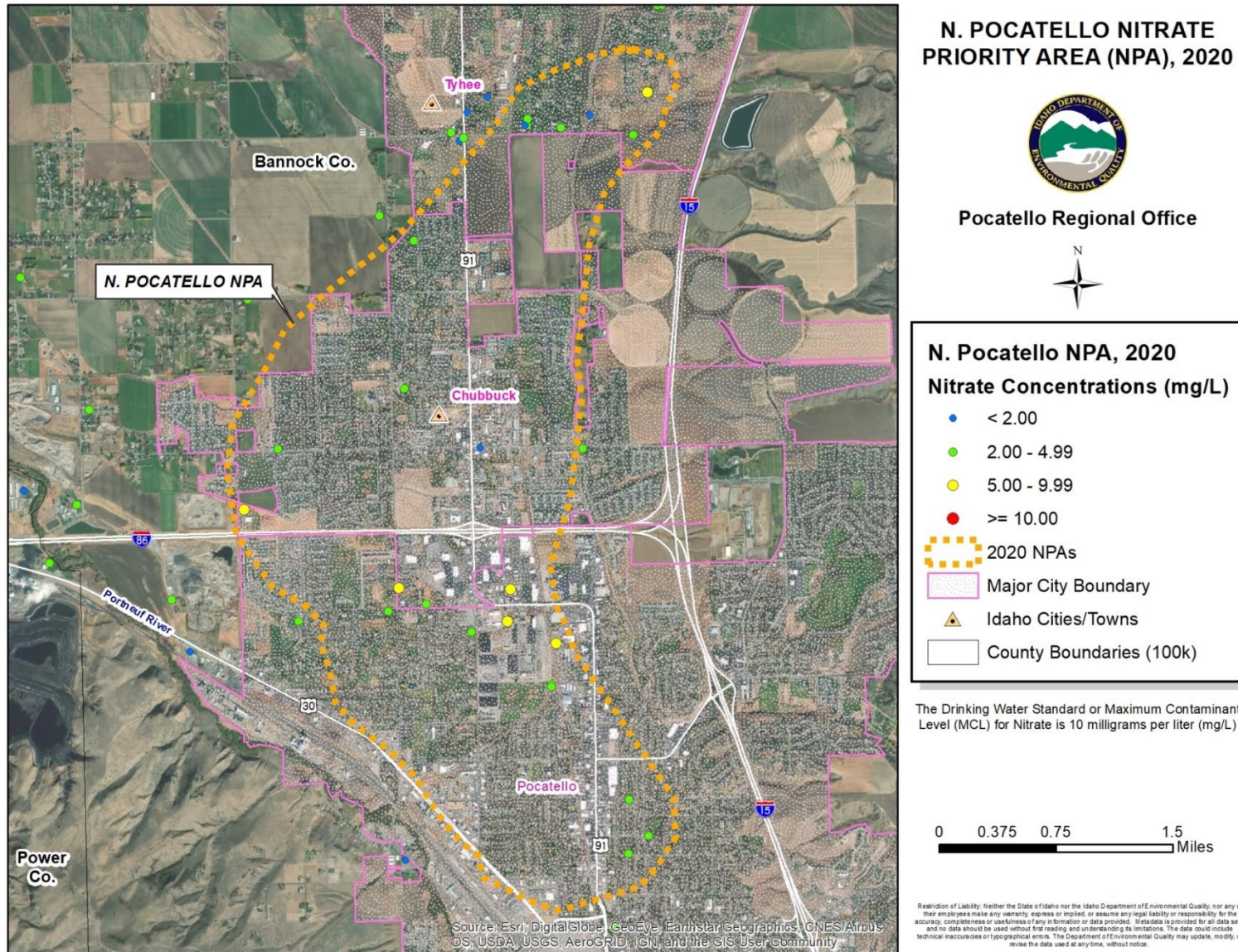


Figure D-9. N. Pocatello NPA 2020 nitrate concentrations.

Table D-8. 2020 North Pocatello NPA summary and scoring sheet.

2020 North Pocatello NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	5,511
Size of NPA (square miles)	9
Population within the NPA*	23,062
Number of Sites Sampled	25
Maximum Nitrate Value (mg/L)	8.9
Average Nitrate Value (mg/L)	4.4
Median (middle) Nitrate Value (mg/L)	4.0
Number of Public Water System sources within NPA	26
Number of source water assessment delineations intersecting the NPA	40
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	22
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	88
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	7
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	28
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	2
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	8
Number of Sites Sampled by DEQ**	20
Number of Sites Sampled by IDWR	3
Number of Sites Sampled by USGS	2
Number of Sites Sampled by ISDA***	0
2020 Trend	<i>Decreasing Tendency</i>
2020 Total Score	12.46
Final Rounded 2020 Score	12
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: N. Pocatello		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2			
>10,001	3	x	3	23,062
(Max. Possible Score for Section 1a = 3)		Subtotal	3	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1			
21 to 40	2	x	2	40
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	2	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	2
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	6	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.88	2	1.76	
Percent of wells with NO ₃ ≥ 5 mg/l	0.28	5	1.4	
Percent of wells with NO ₃ ≥ 10 mg/l	0.08	10	0.8	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	3.96	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5	x	2.5	Decreasing Tendency
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	2.5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	12.46	
		Final Ranking Score*	12	

*Total score rounded to nearest whole number.

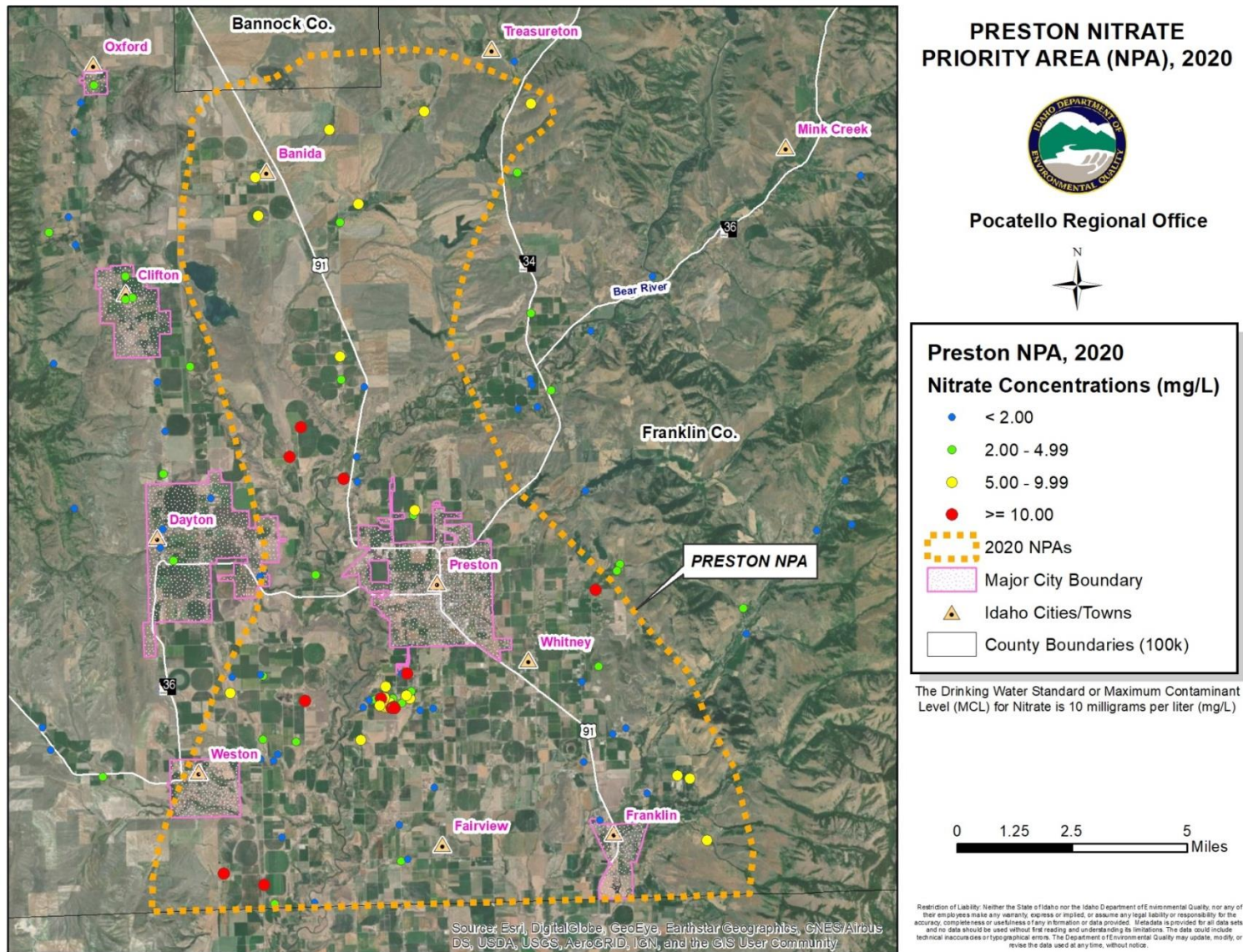


Figure D-10. Preston NPA 2020 nitrate concentrations.

Table D-9. 2020 Preston NPA summary and scoring sheet.

2020 Preston NPA Summary	
DEQ Region	PRO
Size of NPA (acres)	94,761
Size of NPA (square miles)	148
Population within the NPA*	9,856
Number of Sites Sampled	82
Maximum Nitrate Value (mg/L)	27.75
Average Nitrate Value (mg/L)	5.9
Median (middle) Nitrate Value (mg/L)	4.5
Number of Public Water System sources within NPA	14
Number of source water assessment delineations intersecting the NPA	18
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	56
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	68
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	39
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	48
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	13
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	16
Number of Sites Sampled by DEQ**	31
Number of Sites Sampled by IDWR	4
Number of Sites Sampled by USGS	3
Number of Sites Sampled by ISDA***	44
2020 Trend	Decreasing Trend
2020 Total Score	10.36
Final Rounded 2020 Score	10
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Preston		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	9,856
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	18
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	13
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	5	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.68	2	1.36	
Percent of wells with NO ₃ ≥ 5 mg/l	0.48	5	2.4	
Percent of wells with NO ₃ ≥ 10 mg/l	0.16	10	1.6	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	5.36	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0			
Decreasing Tendency	2.5			
Decreasing Trend	0	x	0	Decreasing Trend
(Max. Possible Score for Section 3 = 10)		Trend Score	0	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	10.36	
		Final Ranking Score*	10	

*Total score rounded to nearest whole number.

Appendix E. Idaho Falls Region 2020 Nitrate Priority Area

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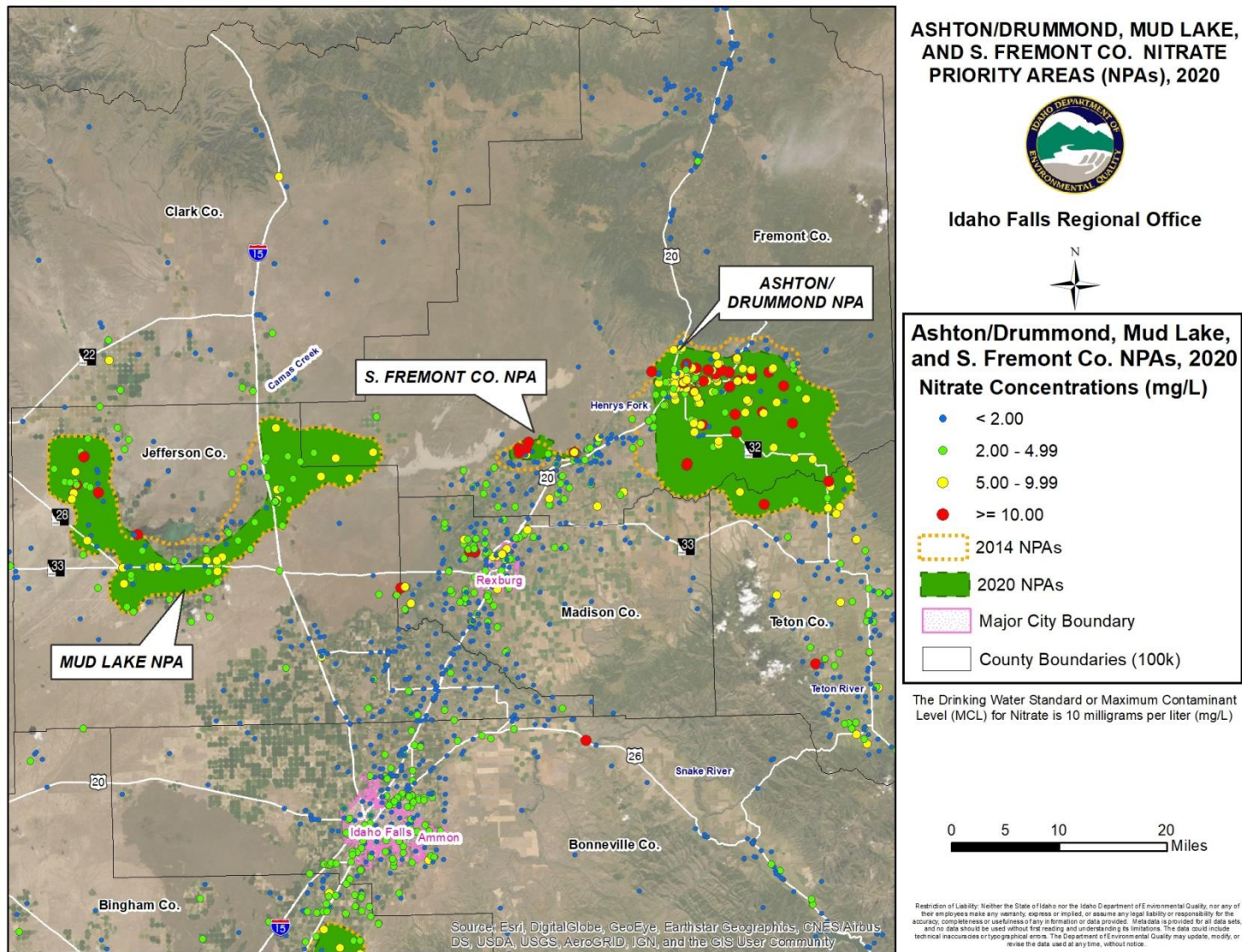


Figure E-1. Ashton/Drummond, Mud Lake, and S. Fremont Co. NPA boundaries.

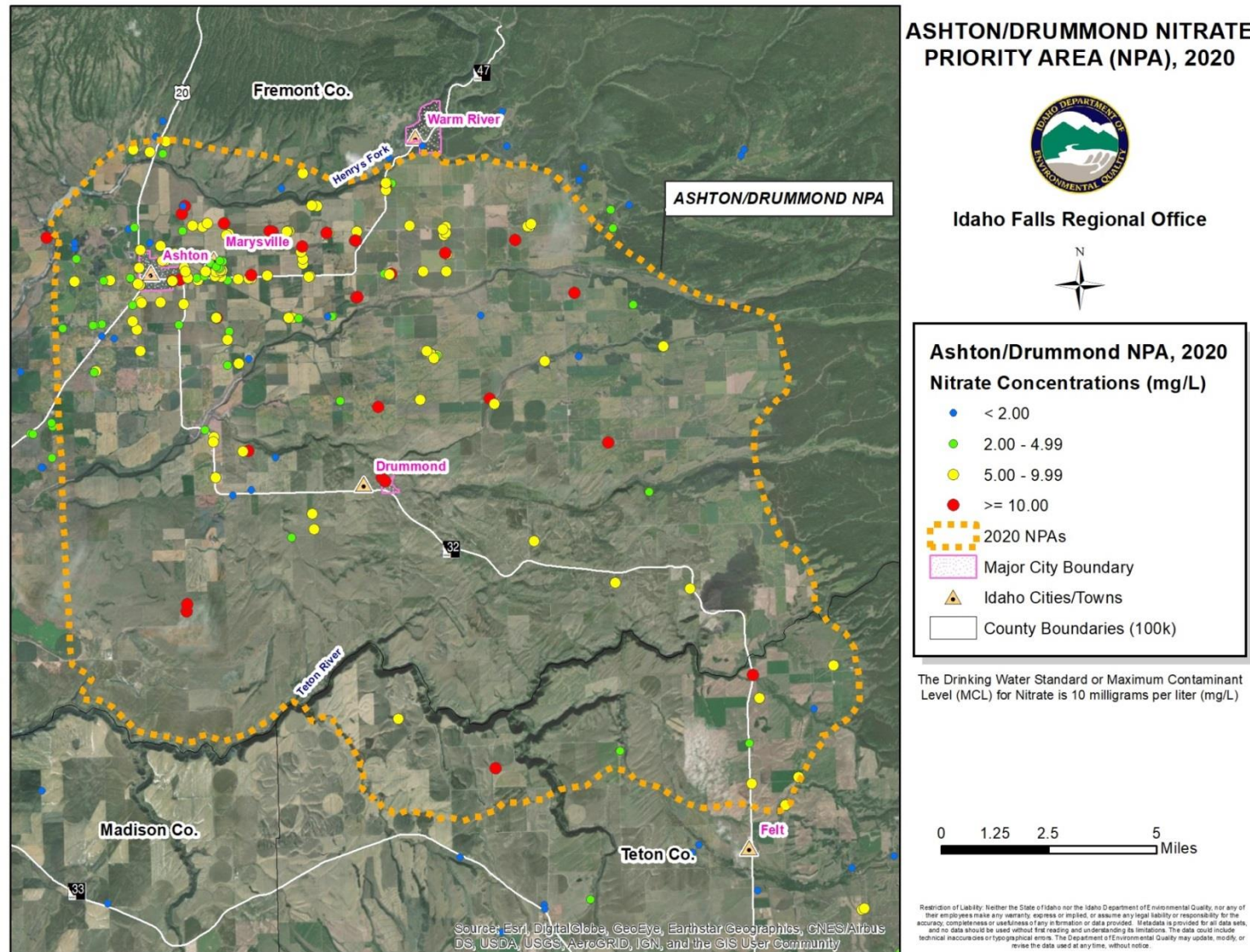


Figure E-2. Ashton/Drummond NPA 2020 nitrate concentrations.

Table E-1. 2020 Ashton/Drummond NPA summary and scoring sheet.

2020 Ashton/Drummond NPA Summary	
DEQ Region	IFRO
Size of NPA (acres)	145,111
Size of NPA (square miles)	227
Population within the NPA*	2,367
Number of Sites Sampled	209
Maximum Nitrate Value (mg/L)	38.3
Average Nitrate Value (mg/L)	7.3
Median (middle) Nitrate Value (mg/L)	6.4
Number of Public Water System sources within NPA	12
Number of source water assessment delineations intersecting the NPA	16
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	187
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	89
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	148
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	71
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	35
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	17
Number of Sites Sampled by DEQ**	33
Number of Sites Sampled by IDWR	10
Number of Sites Sampled by USGS	105
Number of Sites Sampled by ISDA***	61
2020 Trend	No Trend
2020 Total Score	18.03
Final Rounded 2020 Score	18
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Ashton/Drummond		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	2367
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	16
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2			
21 to 40	3	x	3	35
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	3	
(Max. Possible Score for Section 1 = 10)		Population Score Total	6	
2) WATER QUALITY				
	% wells	Nitrate Concentration		
		Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	.89	2	1.78	
Percent of wells with NO ₃ ≥ 5 mg/l	.71	5	3.55	
Percent of wells with NO ₃ ≥ 10 mg/l	.17	10	1.7	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	7.03	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5	
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes=1 No = 0	0	
(Max Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max Possible Total Score = 38)		Total Score	18.03	
		Final Ranking Score*	18	

*Total score rounded to nearest whole number.

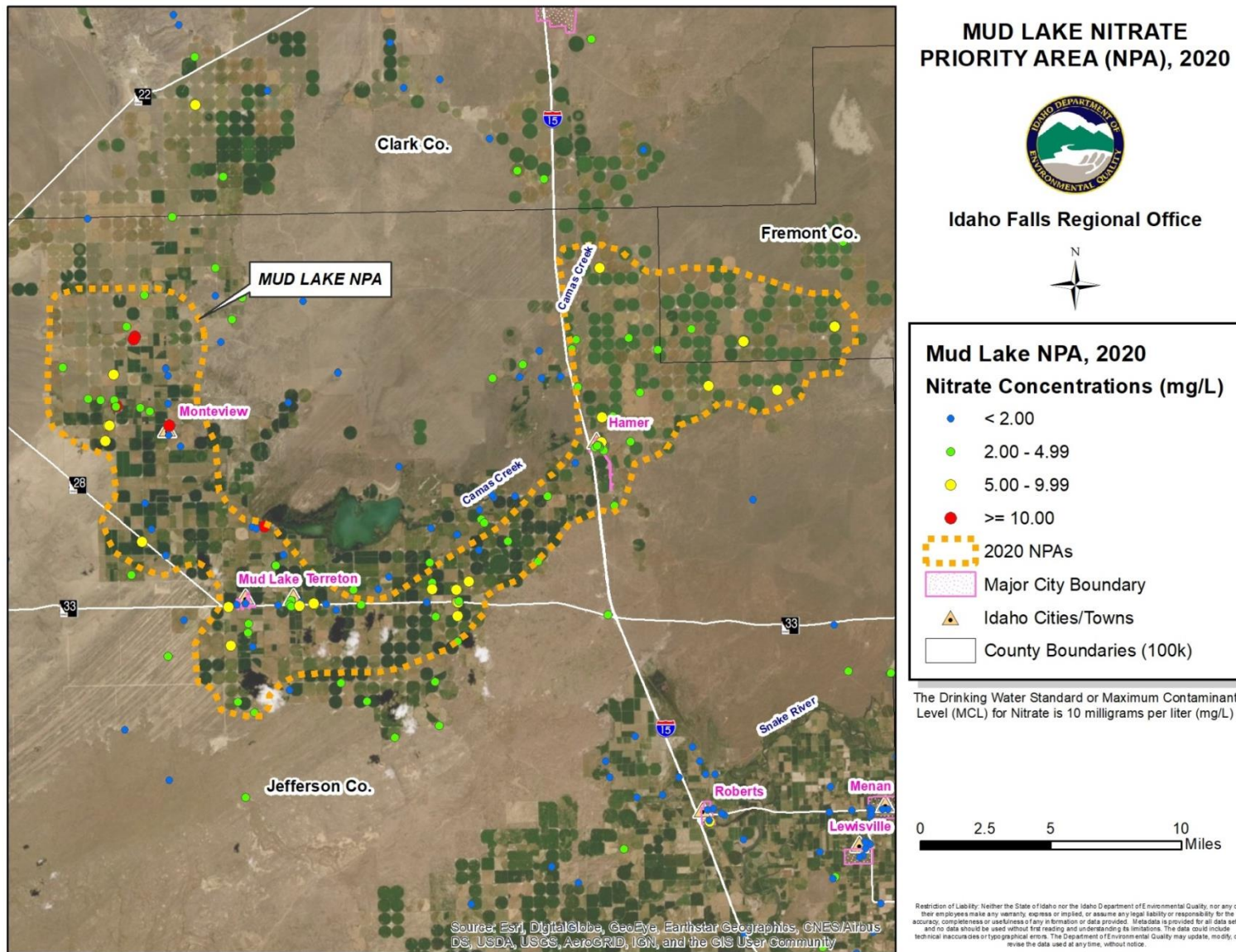


Figure E-3. Mud Lake NPA 2020 nitrate concentrations.

Table E-2. 2020 Mud Lake NPA summary and scoring sheet.

2020 Mudlake NPA Summary	
DEQ Region	IFRO
Size of NPA (acres)	111,709
Size of NPA (square miles)	175
Population within the NPA*	1,682
Number of Sites Sampled	97
Maximum Nitrate Value (mg/L)	26
Average Nitrate Value (mg/L)	4.3
Median (middle) Nitrate Value (mg/L)	4.2
Number of Public Water System sources within NPA	18
Number of source water assessment delineations intersecting the NPA	14
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	73
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	75
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	30
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	31
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	5
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	5
Number of Sites Sampled by DEQ**	39
Number of Sites Sampled by IDWR	16
Number of Sites Sampled by USGS	4
Number of Sites Sampled by ISDA***	38
2020 Trend	No Trend
2020 Total Score	12.55
Final Rounded 2020 Score	13
Priority Category	Moderate
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: Mud Lake		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1			
1000 to 10,000	2	x	2	1,682
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	2	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	18
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1	x	1	5
6 to 20	2			
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	1	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.75	2	1.5	
Percent of wells with NO ₃ ≥ 5 mg/l	0.31	5	1.55	
Percent of wells with NO ₃ ≥ 10 mg/l	0.05	10	0.5	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	3.55	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5.0	No Trend
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	12.55	
		Final Ranking Score*	13	

*Total score rounded to nearest whole number.

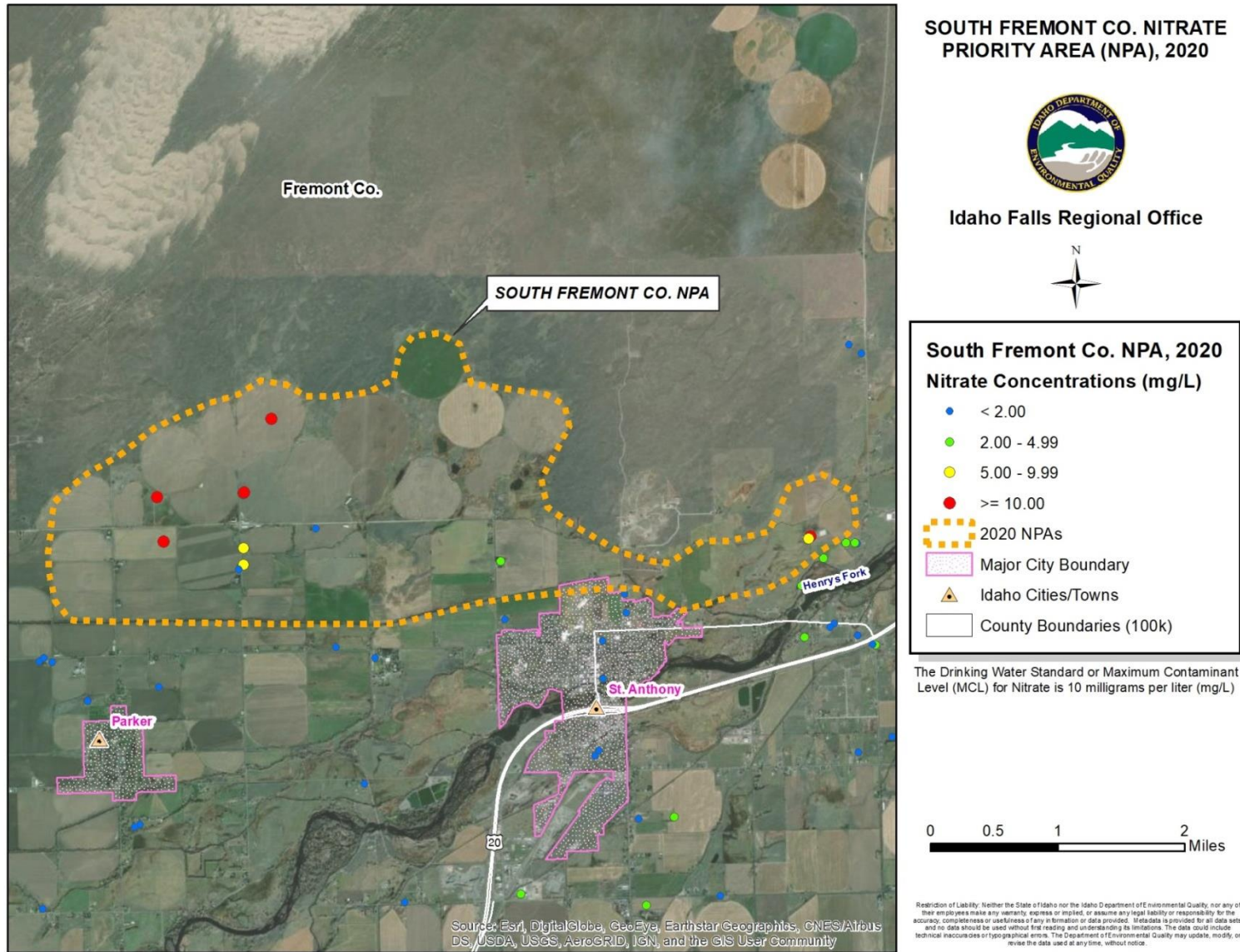


Figure E-4. South Fremont Co. NPA 2020 nitrate concentrations.

Table E-3. 2020 South Fremont Co. NPA summary and scoring sheet.

2020 South Fremont Co. NPA Summary	
DEQ Region	IFRO
Size of NPA (acres)	4,964
Size of NPA (square miles)	8
Population within the NPA*	156
Number of Sites Sampled	13
Maximum Nitrate Value (mg/L)	38
Average Nitrate Value (mg/L)	14.5
Median (middle) Nitrate Value (mg/L)	7.9
Number of Public Water System sources within NPA	0
Number of source water assessment delineations intersecting the NPA	4
Number of sites with nitrate equal to or greater than (\geq) 2 mg/L	11
Percent of sites with nitrate equal to or greater than (\geq) 2 mg/L	85
Number of sites with nitrate equal to or greater than (\geq) 5 mg/L	9
Percent of sites with nitrate equal to or greater than (\geq) 5 mg/L	69
Number of sites with nitrate equal to or greater than (\geq) 10 mg/L	6
Percent of sites with nitrate equal to or greater than (\geq) 10 mg/L	46
Number of Sites Sampled by DEQ**	5
Number of Sites Sampled by IDWR	3
Number of Sites Sampled by USGS	2
Number of Sites Sampled by ISDA***	3
2020 Trend	Ins. Data/No Trend
2020 Total Score	18.75
Final Rounded 2020 Score	19
Priority Category	Moderate - High
*Based on 2010 Census	
**Combination of private wells and public water system wells	
***Combination of private wells and dairy sites	

Priority Area Number:		Priority Area Name: South Fremont Co.		
Ranking Criteria			Score	Comments
1) POPULATION				
	Points	Select One		
a) Within Degraded Area				
<1000	1	x	1	156
1000 to 10,000	2			
>10,001	3			
(Max. Possible Score for Section 1a = 3)		Subtotal	1	
b) Source Water Protection Areas or Public Water System wells in Priority Area				
0	0			
1 to 20	1	x	1	4
21 to 40	2			
>40	3			
(Max. Possible Score for Section 1b = 3)		Subtotal	1	
c) Number of Wells with NO₃ ≥ 10 mg/l				
0	0			
1 to 5	1			
6 to 20	2	x	2	6
21 to 40	3			
>40	4			
(Max. Possible Score for Section 1c = 4)		Subtotal	2	
(Max. Possible Score for Section 1 = 10)		Population Score Total	4	
2) WATER QUALITY				
	% wells	Nitrate Concentration Criteria		
Percent of wells with NO ₃ ≥ 2 mg/l	0.85	2	1.7	
Percent of wells with NO ₃ ≥ 5 mg/l	0.69	5	3.45	
Percent of wells with NO ₃ ≥ 10 mg/l	0.46	10	4.6	
(Max. Possible Score for Section 2 = 17)		Water Quality Total	9.75	
3) WATER QUALITY TRENDS				
		Select One		
Increasing Trend	10.0			
Increasing Tendency	7.5			
No Discernable Trend	5.0	x	5.0	Ins. Data
Decreasing Tendency	2.5			
Decreasing Trend	0			
(Max. Possible Score for Section 3 = 10)		Trend Score	5	
4) OTHER BENEFICIAL USES				
Other beneficial uses are impaired	1	Yes = 1 No = 0	0	
(Max. Possible Score for Section 4 = 1)		Beneficial use score	0	
(Max. Possible Total Score = 38)		Total Score	18.75	
		Final Ranking Score*	19	

*Total score rounded to nearest whole number.